Hossein Najmabadi

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Research Interests
The mandate of the GRC, also designated the National Reference Laboratory for Prenatal Diagnosis in Iran, is to prevent genetic disabilities and disorders by the establishment of a nationwide strategy for the early prenatal diagnosis of genetic disorders. In five areas of preventable genetic disorders, Dr. Najmabadi leads projects that not only apply preventive solutions within the population but also involve nationally and internationally collaborative research in order to improve the quality of life nationwide.

Current Projects
GRC research on cognitive dysfunction in particular mental retardation (MR) includes the evaluation of clinical heterogeneity of MR patients either syndromic or non-syndromic and the establishment of genetic causes using cytogenetics, molecular genetics techniques. The investigation of hemoglobinopathies at the GRC comprises a number of projects to identify the mutation spectrum of alpha- and beta-thalassemia, with the establishment of protocols for mutation identification and prenatal diagnosis. Moreover, studies on the potential elements in the induction of gamma globin as well as the molecular mechanism of hydroxyurea aim to improve the treatment of thalassemia. In the study of both syndromic and non-syndromic deafness, the GRC identifies the genes or mutations particular to Iran and establish diagnostic protocols for them. In order to classify different subtypes of neuromuscular disorders (NMD) in Iran, family DNA studies are guided by the histopathology facilities at the GRC.

Selected publications

Kahrizi K, Mohseni M, Nishimura C, Bazazzadegan N, Fischer SM, Dehghani A, Sayfati M, Taghdiri M, Jamali P, Smith RJ, Azizi F, Najmabadi H. Identification of SLC26A4 gene mutations in Iranian families with hereditary hearing impairment. Eur J Pediatr. 2009;168(6):651-3.

A.W. Kuss, M. Garshasbi, K. Kahrizi, A. Tzschach, F. Behjati, H. Darvish, L. Abbasi Moheb, L. Puettmann, A. Zecha, R. QWeob,amm. H. Hu. M. Mohseni, S.S. Abedini, A. Rajab, Ch. Hertzberg, D. Weiczorek, R. Ullmann, S. Ghasemi-Firozabadi, S. Banihashemi, S. Arzhangi, v. Hadavi, Gh. Bahrami-Monajemi, M. Kasiri, M. Falah, P. Nekoei, A. Dehghan, M. Sobhani, P. Jamali, H.H. Ropers, H. Najmabadi. Autosomal recessive mental retardation: homozygosity mapping identifies 27 single linkage

intervals, at least 14 novel loci and several mutation hotspots. Human Genetics;[Epub ahead of print].

Darvish H, Esmaeeli-Nieh S, Monajemi GB, Mohseni M, Ghasemi-Firouzabadi S, Abedini SS, Bahman I, Jamali P, Azimi S, Mojahedi F, Dehghan A, Shafeghati Y, Jankhah A, Falah M, Soltani Banavandi MJ, Ghani-Kakhi M, Garshasbi M, Rakhshani F, Naghavi A, Tzschach A, Neitzel H, Ropers HH, Kuss AW, Behjati F, Kahrizi K, Najmabadi H. A clinical and molecular genetic study of 112 Iranian families with primary microcephaly. J Med Genet. 2010;47(12):823-8.

Pouya AR, Abedini SS, Mansoorian N, Behjati F, Nikzat N, Mohseni M, Nieh SE, Abbasi L, Darvish H, Monajemi GB, Banihashemi S, Kahrizi K, Ropers HH, Najmabadi H. Fragile X Syndrome Screening of Families with Consanguineous and Non-consanguineous Parents in the Iranian Population. Eur J Med Genet. 2009;52(4):170-3.

Shearer AE, Hildebrand MS, Webster JA, Kahrizi K, Meyer NC, Jalalvand K, Arzhanginy S, Kimberling WJ, Stephan D, Bahlo M, Smith RJ, Najmabadi H. Mutations in the first MyTH4 domain of MYO15A are common cause of DFNB3 hearing loss. Laryngoscope. 2009;119(4):727-33.