A postdoc position in Center for Craniofacial Research

POSITION SUMMARY:
We are seeking a highly motivated postdoc to work on the role of transcription factors in craniofacial development and genetic disorders. This position is available at the Center for Craniofacial Research at the School of Dentistry. Our lab has been working on a novel genetic interaction between TWIST1 and IRF6 transcription factors during craniofacial development. Our data showed that double heterozygous embryos for Twist1 and Irf6 have very small mandible (micrognathia) and cleft palate. We propose to use this mouse model to identify genetic risk factors in Pierre Robin Sequence and also to understand the pathophysiology that leads to micrognathia and cleft palate. The characteristic phenotype of Pierre Robin Sequence (PRS) is micrognathia and cleft palate as well as tongue abnormalities in some cases, which we also observed in our affected murine embryos. Our goals are to understand the mechanism of the genetic interaction and to test the hypothesis that patients with PRS carry DNA variations in genes involved in the IRF6-TWIST1 regulatory pathway during mandibular development.

The postdoc will be responsible to conduct research activities, support and lead lab projects, report and write manuscripts for publications, and also directly work with students in the lab under the direction of the PI. The postdoc will perform lab experiments and in vivo studies using mice as an animal model to study the role of transcription factors and signaling molecules in face and jaw development. We also use ex-vivo mandibular organ and human cell lines to perform biochemical and molecular assays to test biological hypotheses that will allow us to understand the mechanism of action of gene regulation and protein activities. This position is available for two years with the possibility of extension based upon the funding situation.

A PhD degree in biochemistry, molecular biology, molecular genetics or other relevant basic sciences is required. Knowledge in human genetics is preferential but not necessary.

A postdoc experience of 0-2 years is preferential.

Please contact Dr. Walid Fakhouri, Assistant Prof., Walid.D.Fakhouri@uth.tmc.edu, at the School of Dentistry for further information and interest in the position.