HARINARAYANA ANKAMREDDY M.Tech.,Ph.D

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Current position

- **Postdoctoral Research Associate** in Department of Neuroscience (June,2019-till date), Baylor College of Medicine, Houston, The United States of America.

Education

- Doctor of Philosophy (Ph.D) in Medical Sciences (2012-2019) at Yonsei University College of Medicine, Seoul, South Korea.
- MTech in Biotechnology (2008-2010) at GITAM Institute of Technology, GITAM University, Visakhapatnam, India. (FIRST DIVISION)**.**
- BTech in Industrial Biotechnology (2003-2007) at Bharath University, Chennai, India. (FIRST DIVISION)
- Intermediate in (Biology, Physics and Chemistry) (1999-2001) at Ravi Junior College, Kakinada, India. (FIRST DIVISION)

Research Projects

Ph.D Thesis
"ROLES OF HEDGEHOG, BONE MORPHOGENETIC PROTEIN 4 AND CXCL12 SIGNALING ON MIDDLE EAR DEVELOPMENT"
[Work performed at Yonsei University College of Medicine, Seoul, South Korea]

M.Tech Thesis (Major)
"*STUDY ON MIXTURE OF TOLUENE AND PROPANOL DEGRADATION USING ROTATING ROPE BIOREACTOR*"
[Work performed at National Environmental Engineering Research Institute (NEERI), Nagpur, India]

M.Tech Thesis (Minor)
"***COMPUTATIONAL AND MUTATIONAL STUDIES ON SURFACTANT PROTEIN D PRODUCED FROM ALVEOLAR TYPE-II CELLS OF LUNGS IN HUMAN***"
[Work performed at Translational Research Institute of Molecular Sciences, Visakhapatnam, India]

B.Tech Thesis
"*BIOCHEMICAL AND ULTRASTRUCTURAL STUDIES OF CUTICLE COLLAGEN OF EARTHWORM (EISENIA FOETIDA)*"
[Work performed at Indian Institute of Chemical Technology, Hyderabad – 500007, India]

Working Experience

- Teaching assistant at Yonsei University College of Medicine, Seoul, South Korea from March 2011 to March 2019.
- Lecturer in Biotechnology in AGL memorial college, Vizianagaram from August 2007 to June 2008.

Scholarships, Awards and Achievements

- Received an amount of 25,936,600KRW (equal to 25000USD) from Brain Korea-21 PLUS for Medical Sciences Yonsei University during my PhD dissertation work.
- Received an amount of 1,500,000 towards publishing my research in Development Journal (2019, IF:5.763)
- Received an Academic Award of Excellence, Quality Research and publication of outstanding papers in high-impact journals during the PhD enrollment at Department of Medical Sciences, Graduate School of Yonsei University.
- Received best poster presentation awards at Korean Otological Society Research Seminar-2018, South Korea and The 63rd Annual meeting of Korean Association of Anatomists – 2013, South Korea.
- Received best oral presentation awards at The 64th Annual meeting of Korean Association of Anatomists – 2014, South Korea.

Technical Skills

Whole mount and frozen section in-situ hybridization (gene expression studies), Immunohistochemistry, lineage tracing using *lacZ* staining, Hemotoxylin and Eosin staining, Alcian blue and alzarian red staining (cartilage and bone staining), EdU staining (cell proliferation staining in frozen sections), TUNEL staining (Cell death assay in frozen sections).

List of Publications

1. **Harinarayana Ankamreddy,** Jinwoong Bok, and Andrew K. Groves, ***"Uncovering the Secreted Signals and Transcription Factors Regulating the Development of Mammalian Middle Ear Ossicles,"*** Developmental Dynamics, 2020, 249(12): 1410–1424, doi: 10.1002/dvdy.260 **(IF: 3.78,** 2020**)**.
2. **Harinarayana Ankamreddy**, Heiyeun Koo, Young Jae Lee, and Jinwoong Bok, "***CXCL12 is required for stirrup-shaped stapes formation during mammalian middle ear development,"*** Developmental Dynamics, 2020, 249(9):1117-1126, doi: 10.1002/dvdy.180 **(IF: 3.78,** 2020**)**.
3. **Harinarayana Ankamreddy**, Hyehyun Min, Jae Yoon Kim, Xiao Yang, Eui-Sic Cho, Un-Kyung Kim, and Jinwoong Bok, "***Regional-specific endodermal signals direct neural crest cells to form the three middle ear ossicles,***" Development, 2019, 146(2), doi:10.1242/dev.167965 **(IF: 6.868,** 2020**)**
4. Jeong-Oh Shin*, **Harinarayana Ankamreddy***, Naga Mahesh Jakka, Seokwon Lee, Un-Kyung Kim and Jinwoong Bok, ***"Temporal and spatial expression patterns of Hedgehog receptors in the developing inner and middle ear,"*** Int. J. Dev. Biol., 2017, 61: 557 - 563. (*: equal contribution) **(IF: 2.203,** 2020**)**.
5. Se-Kyung Oh, Jeong-Oh Shin, Jeong-In Baek, Jinwook Lee, Jae Woong Bae, **Harinarayana Ankamerddy**, Myoung-Jin Kim, Tae-Lin Huh, Zae-Young Ryoo, Un-Kyung Kim, Jinwoong Bok, Kyu-Yup Lee, "***Pannexin 3 is required for normal progression of skeletal development in vertebrates,"*** FASEB, 2015, doi:10.1096/fj.15-273722. **(IF: 5.191,** 2020**)**.
6. Eun Jin Son, Ji-Hyun Ma, **Harinarayana Ankamreddy**, Jeong-Oh Shin, Jae Young Choi, Doris K. Wu, Jinwoong Bok, "***Conserved role of Sonic Hedgehog in tonotopic organization of the avian basilar papilla and mammalian cochlea*****,"** Proc Natl Acad Sci U S A., 2015, 112(12): 3746-3751. **(IF: 11.205,** 2020**)**.
7. Hongkyung Kim, **Harinarayana Ankamreddy**, Dong Jin Lee, Kyoung-Ah Kong, Hyuk Wan Ko , Myoung Hee Kim, Jinwoong Bok, "***Pax3 function is required specifically for inner ear***

***structures with melanogenic fates**,"* Biochem Biophys Res Commun., 2014, 445(3):608-614 **(IF: 3.575,** 2020**)**.

8. Y. Ram Babu, K. Rama Krishna, M. Lakshmi Narasu, **Hari Narayana A**, M.Taraka Ramji, "*Docking studies of carbohydrate ligands against native and mutant Surfactant Protein-D from Lung Alveolar Type II cells,"* Der Pharma Chemica, 2010, 2(2): 27-36.

Poster Presentations

1. **Harinarayana Ankamreddy**, Hyehyun Min, Jae Yoon Kim, Xiao Yang, Eui-Sic Cho, Un-Kyung Kim, Jinwoong Bok, "*Pharyngeal endodermal signals are essential for neural crest cells to initiate the middle ear condensations*," Korean Otological Society Research Seminar-2018, South Korea. (Selected as best poster presentation)
2. **Harinarayana Ankamreddy**, Hyehyun Min, Jae Yoon Kim, Xiao Yang, Eui-Sic Cho, Un-Kyung Kim, Jinwoong Bok, "*Pharyngeal endodermal signals are essential for neural crest cells to initiate the middle ear condensations*," IUBMB-2018, South Korea.
3. Jeong-Oh Shin, **Harinarayana Ankamreddy**, Seokwon Lee, Un-Kyung Kim, Jinwoong Bok, "*Temporal and spatial expression patterns of Hedgehog receptors in the developing inner and middle ear*," IUBMB-2018, South Korea.
4. **Harinarayana Ankamreddy**, Xiao Yang, Eui-Sic Cho, Jinwoong Bok, "*Temporal-Spatial requirement of hedgehog and BMP signaling on middle ear development*," The 66th Annual meeting of Korean Association of Anatomists – 2016, South Korea.
5. **Harinarayana Ankamreddy**, Xiao Yang, Eui-Sic Cho, Jinwoong Bok, "*Temporal-Spatial requirement of hedgehog and BMP signaling on middle ear development*," Otological Research seminar-2016, Korean Otological Society, South Korea.
6. **Harinarayana Ankamreddy**, Xiao Yang, Eui-Sic Cho, Jinwoong Bok, "*Tempo-Spatial requirements of Hedgehog and BMP signaling during middle ear development*," 39th Annual midwinter meeting-2016, Association for Research in Otolaryngology (ARO), United States of America.
7. **Harinarayana Ankamreddy**, Xiao Yang, Eui-Sic Cho, Jinwoong Bok, "*Spatial and temporal requirements of TGF-beta and Hedgehog signaling in middle ear development*," The 26th KSMCB Winter Conference – 2015, South Korea.
8. Ji-Hyun Ma, Eun Jin Son, **Harinarayana Ankamreddy**, Jeong-Oh Shin, Jae Young Choi, Doris K. Wu, Jinwoong Bok, "*Tonotopy organization of the vertebrate cochlea may require gradient of Shh signaling*," The 26th KSMCB Winter Conference – 2015, South Korea.
9. Hei Yeun Koo, Ji-Hyun Ma, Jeong-Oh Shin, **Harinarayana Ankamreddy**, Jinwoong Bok, "*Role of Follistatin in inner ear development*," The 26th KSMCB Winter Conference – 2015, South Korea.
10. Hei Yeun Koo, Ji-Hyun Ma, Jeong-Oh Shin, **Harinarayana Ankamreddy**, Eun Jin Son, Ju Hyun Jeon, Jinwoong Bok, "*Role of Follistatin in inner ear development*," The 64th Annual meeting of Korean Association of Anatomists – 2014, South Korea.
11. **Harinarayana Ankamreddy**, Jeong-Oh Shin, Xiao Yang, Eui-Sic Cho, Jinwoong Bok, "*Temporal requirement of TGF-beta and Hedgehog signaling during middle ear ossicle formation*," 73rd Annual meeting of Society for Developmental Biology - 2014, United States of America.
12. Ji Hyun Ma, Eun Jin Son, **Harinarayana Ankamreddy**, HongKyung Kim, Jae Young Choi, Doris K. Wu, Jinwoong Bok, "*Sonic hedgehog gradient regulates the tonotopic patterning of the vertebrate cochlea*," 73rd Annual meeting of Society for Developmental Biology - 2014, United States of America.
13. Ji-Hyun Ma, Eun Jin Son, **Harinarayana Ankamreddy**, HongKyung Kim, Jae Young Choi, Doris K. Wu, Jinwoong Bok, "*Sonic hedgehog gradient regulates the tonotopic patterning of the vertebrate cochlea*," The 19th Annual meeting of Korean Society for Biomedical Laboratory Sciences – 2013, South Korea.
14. **Harinarayana Ankamreddy**, Xiao Yang, Eui-Sic Cho, Jinwoong Bok, "*Temporal requirement of TGF-beta and Hedgehog signaling during middle ear ossicle formation*," The 19th Annual meeting of Korean Society for Biomedical Laboratory Sciences – 2013, South Korea.
15. Ji-Hyun Ma, Eun Jin Son, **Harinarayana Ankamreddy**, HongKyung Kim, Jae Young Choi, Doris K. Wu, Jinwoong Bok, "*Sonic hedgehog gradient regulates the tonotopic patterning of the*

vertebrate cochlea," The 63rd Annual meeting of Korean Association of Anatomists – 2013, South Korea.

16. **Harinarayana Ankamreddy**, Xiao Yang, Eui-Sic Cho, Jinwoong Bok, "*Temporal requirement of TGF-beta and Hedgehog signaling during middle ear ossicle formation*," The 63rd Annual meeting of Korean Association of Anatomists – 2013, South Korea. (Selected as best poster presentation)
17. **Harinarayana Ankamreddy**, Duyeol Han, Xiao Yang, Eui-Sic Cho, Jinwoong Bok, "*Role of Hedgehog and TGF-beta signaling in middle ear development*," The 18th Annual meeting of the Korean Society for Biomedical Laboratory Sciences – 2012, South Korea.
18. **Harinarayana Ankamreddy**, Duyeol Han, Xiao Yang, Eui-Sic Cho, Jinwoong Bok, "*Role of Hedgehog and TGF-beta signaling in middle ear development*," The 62nd Annual meeting of Korean Association of Anatomists – 2012, South Korea.

Oral Presentations

1. **Harinarayana Ankamreddy**, Hyehyun Min, Jae Yoon Kim, Xiao Yang, Eui-Sic Cho, Un-Kyung Kim, Jinwoong Bok, "*Differential roles of endodermal signals on Neural Crest Cells to initiate the middle ear condensations*," Joint conference of 8th Asia Pacific International Congress of Anatomists and 68th Korean Association of Anatomists – 2018, South Korea.
2. **Harinarayana Ankamreddy**, Xiao Yang, Eui-Sic Cho, Jinwoong Bok, "*Roles of Hedgehog and TGF-beta in the specification of middle ear*," The 65th Annual meeting of Korean Association of Anatomists – 2015, South Korea.
3. Hei Yeun Koo, Ji-Hyun Ma, Jeong-Oh Shin, **Harinarayana Ankamreddy**, Jinwoong Bok, "*Follistatin is required for patterning of mechanosensory hair cells in the apical cochlea*," The 65th Annual meeting of Korean Association of Anatomists – 2015, South Korea.
4. **Harinarayana Ankamreddy**, Xiao Yang, Eui-Sic Cho, Jinwoong Bok, "*Temporal requirement of TGF-beta and Hedgehog signaling during middle ear ossicle formation*," ," The 64th Annual meeting of Korean Association of Anatomists – 2014, South Korea. (Selected as best oral presentation)
5. Ji-Hyun Ma, Eun Jin Son, **Harinarayana Ankamreddy**, Jeong-Oh Shin, Jae Young Choi, Doris K. Wu, Jinwoong Bok, "*Sonic hedgehog signaling confers regional identity along the tonotopic axis of cochlea*," ," The 64th Annual meeting of Korean Association of Anatomists – 2014, South Korea.

Professional Memberships

- Member in Association for Research in Otolaryngology (ARO) since 15th September, 2015-31st December, 2021.
- Member in American Association for Anatomy (AAA) and Society for Craniofacial Genetics and Developmental Biology (SCGDB) since 1st February, 2020 till date.
- Member in Korean Association of Anatomists during 2011-2018

Other Activities

- Mentored the Peer Career Exploration Group program, sponsored by Office of Postdoctoral affairs and Career Development Center of Baylor College of Medicine (July-November, 2020).
- Group instructor to four BCM Summer Undergraduate Research Program (SMART) students sponsored from BCM Graduate School of Biomedical Sciences (Summer-2020).

Reference

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Declaration

I hereby declare that the information furnished is true to the best of my knowledge.

Place: Houston

Harinarayana Ankamreddy

Date: 16-04-2022