Curriculum Vitae

Satish Kumar, PhD.

Associate Professor
Division of Human Genetics &
South Texas Diabetes and Obesity Institute
University of Texas Rio Grande Valley
School of Medicine

Contact Information

MBMRF 2.219 (McAllen)
5300 L St,
McAllen, TX 78504
Phone: (Work): +1-956-665-6477 (Cell): +1-210-478-7251
Email: satish.kumar@utrgv.edu

Education & Training

2003 Doctor of Philosophy [Ph.D.] Human Population Genetics
Department of Anthropology, University of Delhi, Delhi
Thesis title: “Genetic Structure of the Scheduled Tribes of Rajasthan”

1996 Masters of Science [M.Sc.]
Anthropology, Specialization Physical/Biological Anthropology
Department of Anthropology, University of Delhi, Delhi

1994 Bachelors of Science [B.Sc.]
Botany (Honours), Zoology and Chemistry
University of Delhi, Delhi

Honors & Awards

1997-	Qualified National Eligibility for Research and Lectureship, University Grant Commission of India
1998 - 1999	Research Fellowship, Ministry of Environment & Forest, Govt. of India, New Delhi, India

Work Experience

09/01/21 – present:	Associate Professor, Division of Human Genetics & South Texas Diabetes and Obesity Institute (STDOI), University of Texas Rio Grande Valley (UTRGV) School of Medicine, McAllen, TX, USA
09/01/20 – 08/31/21	Associate Professor of Research, Division of Human Genetics & South Texas Diabetes and Obesity Institute (STDOI), University of Texas Rio Grande Valley (UTRGV) School of Medicine, McAllen, TX, USA
03/23/15 – 8/31/20	Assistant Professor of Research, Division of Human Genetics & South Texas Diabetes and Obesity Institute (STDOI), University of Texas Rio Grande Valley (UTRGV) School of Medicine, Edinburg, TX, USA
02/01/09 – 03/22/15	Staff Scientist I, Texas Biomedical Research Institute, San Antonio, TX, USA
12//05/01 – 12/26/08	Assistant Anthropologist (Physical), Group 'B' (Gazetted) at Anthropological Survey of India, Govt. of India, Southern Regional Centre, Mysore, India
12/23/99 – 12/01/01	Scientific Assistant (Biology & DNA Fingerprinting) at Forensic Science Laboratory, Govt. of NCT of Delhi, New Delhi.

Professional Affiliations/Memberships

The American Society of Human Genetics (ASHG).
The Human Genome Organization (HUGO).
The Indian Society for Human Ecology, Department of Anthropology, University of Delhi, Delhi, India.

Professional Activities and Services

Editorial Board Member:

2019 - Present	Journal of Human and Clinical Genetics
2021 – Present	Journal of Biosciences and Medicines
2021 – Present	Clinical and Translational Discovery
2019 – 2022	International Journal of Genetics and Genomics
2017 – 2019	AIMS Cell and Tissue Engineering

***Manuscript reviewer*:**

Scientific Reports, Journal of Advanced Research, SPG-International Journal of Genetics and Genomics, International Journal of Genomics, *Plos-One,* IEEE/ACM Transactions on Computational Biology and Bioinformatics, IJMS-International Journal of Molecular Sciences, Cells, Journal of Biological Methods, International Journal of Human Genetics, Universitas Scientiarum.

Institutional Committees:

2022 – present	Member, Admissions Committee, Ph.D. Program in Human Genetics, Division of Human Genetics, University of Texas Rio Grande Valley School of Medicine, UTRGV
2024 – present	Member, Accreditation Review & Continuous Quality Improvement (ARCQI) Committee, University of Texas Rio Grande Valley School of Medicine, UTRGV
2021 – 2023	Faculty Representative, Diversity Committee, University of Texas Rio Grande Valley School of Medicine, UTRGV

Conference Committees:

2007 – 2009	Co-organizer and Lecturer, Diversity to Discovery Training course, Anthropological Survey of India, Mysore, India

Research Focus

Dr. Kumar's research focuses on developing and applying innovative induced pluripotent stem cell (iPSC) based methods, genome editing technologies, and *in-vitro* cell models to identify genetic and environmental determinants of human disease risk. Dr. Kumar is developing novel approaches for *in-vitro* modeling and high-thruput multi-omic analysis of cellular models for various human diseases and disorders, including Alzheimer's disease, Parkinson's disease, major depressive disorders, infectious diseases, human cancers, type 2 diabetes, cardiovascular disease, cardiomyopathies, obesity, and fatty liver disease.

He has developed an efficient iPSC reprogramming methodology for cryopreserved lymphoblastoid (immortalized B lymphocytes) cell lines (LCLs). This cost-effective and highly successful method has the potential to have a significant impact in the field, as many sample repositories around the world have banked LCLs that can be utilized for iPSC generation. Using this method and a large LCL repository maintained at the Division of Human Genetics and South Texas Diabetes and Obesity Institute (STDOI), Dr. Kumar has established a large iPSC resource from hundreds of individuals of the STDOI's longitudinal Mexican American Family Study. This stem cell resource is being used in several large genetic and functional genomic studies in the institute, including multi-year multi-million dollar projects funded by the National Institute of Health (NIH) on non-alcoholic fatty liver disease and the study of Genotype×Environment interaction. Dr. Kumar serves as a Multi-Principal Investigator and Project Co-Leader on these projects. In another NIH-funded project, Dr. Kumar has developed iPSC reprogramming and differentiation methodologies for *Monodelphis domestica*, a well-established laboratory-bred marsupial animal model. The generated *M. domestica* iPSCs are the first integration-free and the second ever reprogrammed from a marsupial species. The established *M. domestica* iPSCs are being used by laboratories around the world in comparative biology and biomedical research. More recently, Dr. Kumar has developed

a genome-edited model of amyloid beta stress to study the etiology of sporadic late-onset Alzheimer's disease.

Apart from his current endeavor in developing iPSC-based methodologies and cellular models of human disease, Dr. Kumar has had a major role in several large-scale, NIH, and industry-funded human genetics projects, aimed at identifying genes influencing human complex diseases. He also has a strong interest in human phylogenetics, mitochondrial functions, and mitochondrial retrograde regulation and their role in human disease risk.

Teaching and Research Mentoring

2023 – 2024

Division of Human Genetics Ph.D. program, UTRGV School of Medicine

Cources (Didactic Lectures)

HGEN 8301 Molecular Genetics, (06 lectures)
HGEN 8305 Genetic Basis of Human Disease (03 lectures)
HGEN8375 Stem Cell-Based Methodologies in Human Disease Gene Identification (12 lectures)
HGEN835 Advanced Topics in Neurogenetics Schedule (2 lectures)
HGEN 8355 Advanced Topics in Omics Research (2 lectures)

Group-Based Learning

HGEN 8315 Current Topics in Human Genetics (02 Sessions)
HGEN8375 Stem Cell-Based Methodologies in Human Disease Gene Identification (04 Sessions)

Directed Research

Directed research rotation for two Ph.D. students in the stem cell laboratory.

2022 – 2023

Division of Human Genetics Ph.D. program, UTRGV School of Medicine

Didactic Lectures

HGEN 8301 Molecular Genetics, (06 lectures)
HGEN 8305 Genetic Basis of Human Disease (03 lectures)

Group-Based Learning

HGEN 8315 Current Topics in Human Genetics (02 Sessions)
HGEN 8101 Student Seminar (01 Session)

Employee Research and Training

Trained Dr. Miriam Aceves, who joined our laboratory this year as an Assistant Research Scientist, in stem cell culture, differentiation, and cellular phenotyping methods for *in-vitro* modeling of human disease phenotypes
Trained Mr. Jose Granados (Research Associate III), and Ms. Erica De Leon (Research Associate I), in iPSC differentiation and single-cell analysis methodologies.

2021 – 2022

Research Mentoring of High School Students

Co-supervised summer research project of a high school student: title “Human iPSC derived cardiomyocyte model reveals the transcriptomic bases of COVID-19 associated myocardial injury”

The research project resulted in several “Science and Engineering Fair” awards to the students and in a peer-reviewed abstract and podium presentation at the UTRGV SOM Annual Research Symposium 2021.

2020 – 2021

Research Mentoring of Medical Students

Mentored one MS1 scholarly (MEDI-8127) research project, titled “Functional characterization of the iPSC generated hepatocytes using genome-wide transcriptomic analysis”.

Employee Research and Training

Trained Mr. Jose Granados, Research Associate III, who joined the Department of Human Genetics and STDOI on November 1st, 2020, in LCL culture; differentiation, cryopreservation, and immunocytochemistry analysis of the iPSC generated neural stem cells.

Trained Ms. Erica De Leon, Research Associate I in the Department of Human Genetics and STDOI, in iPSC reprograming, iPSC cryopreservation, and iPSC differentiation methodologies.

2019 – 2020

Guest Lectures to Medical Students

Module "Molecules to Medicine" in first-year medical student curriculum at the University of Texas Rio Grande Valley School of Medicine, Edinburg, TX

- Bioinformatics-Part I
- Bioinformatics-Part II
- Stem cell Basics
- Stem cell applications
- Cell Signaling Basic
- Signal Transduction Pathways-Short Term Cellular Response
- Signal Transduction Pathways-Longer Term Cellular Response

Research Mentoring of Medical Students

Mentored one MS1 scholarly (MEDI-8127) research project: titled “Develop an iPSC derived hepatic cell culture based *in-vitro* model to study nonalcoholic fatty liver disease (NAFLD).”

Employee Research and Training

Mentored/Trained Ms. Erica De Leon, Research Associate I in the Department of Human Genetics and STDOI, in LCL culture, iPSC reprogramming, differentiation of iPSCs into disease target cells, and in her research on “Transcriptomic and functional profiles of iPSC generated cardiomyocytes”.
Trained Ms. Laura Valdez, Graduate Student in the Molecular Science Laboratory, Department of Biomedical Sciences, UTRGV SOM in iPSC culture and cryopreservation

2018 – 2019 *Guest Lectures to Medical Students*

Module "Molecules to Medicine" in first-year medical student curriculum at the University of Texas Rio Grande Valley School of Medicine, Edinburg, TX

- Bioinformatics-Part I
- Bioinformatics-Part II
- Stem cell Basics
- Stem cell applications

Employee Research and Training
Mentored/Trained Ms. Erika Espinosa, Research Associate I, Research Associate I in the Department of Human Genetics and STDOI, in cardiomyocyte and hepatic cell differentiation from iPSCs, DNA and RNA extraction, genome-wide ATAC sequencing and RNA sequencing technologies and mentioned her research on “Generation of functional cardiomyocytes from cryopreserved LCLs using iPSC technology”.

2017 – 2018 *Guest Lectures to Medical Students*

Module "Molecules to Medicine" in first-year medical student curriculum at the University of Texas Rio Grande Valley School of Medicine, Edinburg, TX

- Bioinformatics-Part I
- Bioinformatics-Part II

Employee Research and Training
Trained Ms. Erika Espinosa, Research Associate I, Research Associate I, STDOI, in iPSC reprogramming methodology, differentiation of generated iPSC lines into neural stem cells (NSC), culturing, cryopreservation, Immunocytochemistry analysis of generated NSC lines and bright field and epi-fluorescence microscopy techniques using both research microscope and high content screening system.

2006 – 2009 *Research mentoring of Ph.D. Student*

While working at the Anthropological Survey of India, I was the coordinator of the Survey's Ph.D. assistance program and I mentored three students in their Ph.D. research and trained several graduate students in molecular genetics techniques.
Mr. Gopichand M., research topic "Angiotensinogen Gene - M268T variant in Indian Populations and predisposition to essential hypertension, obesity and hyperlipidemia".
Mr. Rajasekhara Reddy Ravuri, research topic "Mitochondrial DNA and TCF7L2 Gene Polymorphisms in Type II Diabetes".
Ms. Padmaja Koneru, research topic "ADIPOQ, HHEX and KCNJ11 Gene Polymorphisms in Type II Diabetes".

Publications

Original publications in peer-reviewed Journals

1. Aceves M, Granados J, Leandro AC, Peralta J, Glahn DC, Williams-Blangero S, Curran JE, Blangero J, **Kumar S.** (2024) Role of Neurocellular Endoplasmic Reticulum Stress Response in Alzheimer's Disease and Related Dementias Risk. Genes (Basel). 2024 Apr 28;15(5):569. doi: 10.3390/genes15050569. PMID: 38790197; PMCID: PMC11121587.
2. **Kumar S**, Granados J, Aceves M, Peralta J, Leandro AC, Thomas J, Williams-Blangero S, Curran JE, Blangero J (2024). Pre-Infection Innate Immunity Attenuates SARS-CoV-2 Infection and Viral Load in iPSC-Derived Alveolar Epithelial Type 2 Cells. Cells. 2024 Feb 21;13(5):369. doi: 10.3390/cells13050369. PMID: 38474333; PMCID: PMC10931100.
3. Howard T, Almeida M, Diego V, Viel K, Luu B, Haack K, Raja R, Ameri A, Chitlur M, Rydz N, Lillicrap D, Watts R, Kessler C, Ramsey C, Dinh L, Kim B, Powell J, Peralta J, Bouls R, Abraham S, Shen YM, Murillo C, Mead H, Lehmann P, Fine E, Escobar M, **Kumar S**, Williams-Blangero S, Kasper C, Almasy L, Cole S, Blangero J, Konkle B. (2023) A Scan of Pleiotropic Immune Mediated Disease Genes Identifies Novel Determinants of Baseline FVIII Inhibitor Status in Hemophilia-A. Res Sq [Preprint]. 2023 Oct 18:rs.3.rs-3371095. doi: 10.21203/rs.3.rs-3371095/v1. PMID: 37886476; PMCID: PMC10602130.
4. Mathias SR, Knowles EEM, Mollon J, Rodrigue AL, Woolsey MK, Hernandez AM, Garret AS, Fox PT, Olvera RL, Peralta JM, **Kumar S,** Goring HHH, Duggirala R, Curran JE, Blangero J, Glahn DC. (2023) Cocktail-party listening and cognitive abilities show strong pleiotropy. Front Neurol. 2023;14:1071766. Epub 2023/03/28. doi: 10.3389/fneur.2023.1071766. PubMed PMID: 36970519; PMCID: PMC10035755.
5. **Kumar S**, De Leon EM, Granados J, Whitworth DJ, VandeBerg JL. (2022) Monodelphis domestica Induced Pluripotent Stem Cells Reveal Metatherian Pluripotency Architecture. Int J Mol Sci. 2022;23(20). Epub 2022/10/28. doi: 10.3390/ijms232012623. PubMed PMID: 36293487; PMCID: PMC9604385.

6. Mathias SR, Knowles EEM, Mollon J, Rodrigue AL, Woolsey MK, Hernandez AM, Garrett AS, Fox PT, Olvera RL, Peralta JM, **Kumar S,** Goring HHH, Duggirala R, Curran JE, Blangero J, Glahn DC. (2022) The Genetic contribution to solving the cocktail-party problem. iScience. 2022;25(9):104997. Epub 2022/09/17. doi: 10.1016/j.isci.2022.104997. PubMed PMID: 36111257; PMCID: PMC9468408.

7. Blackburn NB, Meikle PJ, Peralta JM, **Kumar S**, Leandro AC, Bellinger MA, Giles C, Huynh K, Mahaney MC, Göring HHH, VandeBerg JL, Williams-Blangero S, Glahn DC, Duggirala R, Blangero J, Michael LF, Curran JE (2021). Identifying the Lipidomic Effects of a Rare Loss-of-Function Deletion in *ANGPTL3*. Circ Genom Precis Med. 2021 Apr 22. doi: 10.1161/CIRCGEN.120.003232. Epub ahead of print. PMID: 33887960.

8. **Kumar S,** Curran JE, Williams-Blangero S, Blangero J (2021). Efficient Generation of Functional Hepatocytes from Human Induced Pluripotent Stem Cells for Disease Modeling and Disease Gene Discovery. Methods Mol Biol. 2021 Mar 27. doi: 10.1007/7651_2021_375. Epub ahead of print. PMID: 33772461.

9. **Kumar S,** Curran JE, Kumar K, DeLeon E, Leandro AC, Peralta J, Williams-Blangero S, Blangero J (2021). Disease Modeling and Disease Gene Discovery in Cardiomyopathies: A Molecular Study of Induced Pluripotent Stem Cell Generated Cardiomyocytes. Int J Mol Sci. 2021 Mar 24;22(7):3311. doi: 10.3390/ijms22073311. PMID: 33805011.

10. Morales LD, Cromack DT, Tripathy D, Fourcaudot M, **Kumar S**, Curran JE, Carless M, Göring HHH, Hu SL, Lopez-Alvarenga JC, Garske KM, Pajukanta P, Small KS, Glastonbury CA, Das SK, Langefeld C, Hanson RL, Hsueh WC, Norton L, Arya R, Mummidi S, Blangero J, DeFronzo RA, Duggirala R, Jenkinson CP (2021). Further evidence supporting a potential role for ADH1B in obesity. Sci Rep., 11(1):1932. doi: 10.1038/s41598-020-80563-z. PMID: 33479282; PMCID: PMC7820614.

11. **Kumar S,** Curran JE, DeLeon E, Leandro AC, Howard TE, Lehman DM, Williams-Blangero S, Glahn DC, Blangero J (2020). Role of miRNA-mRNA interaction in neural stem cell differentiation of induced pluripotent stem cells. Int J Mol Sci. 2020;21(19). Epub 2020/09/27. doi: 10.3390/ijms21196980. PubMed PMID: 32977388.

12. **Kumar S,** Curran JE, Espinosa EC, Glahn DC, Blangero J (2020). Highly efficient induced pluripotent stem cell reprogramming of cryopreserved Lymphoblastoid cell lines. J. Biol. Methods*.,* 7(1): e124. doi: 10.14440/jbm.2020.296

13. Diego VP, Luu BW, Hofmann M, Dinh LV, Almeida M, Powell JS, Rajalingam R, Peralta JM, **Kumar S**, Curran JE, Sauna ZE, Kellerman R, Park Y, Key NS, Escobar MA, Huynh H, Verhagen AM, Williams-Blangero S, Lehmann PV, Maraskovsky E, Blangero J, Howard TE (2020). Quantitative HLA-class-II/Factor VIII (FVIII) Peptidomic Variation in Dendritic Cells Correlates with the

Immunogenic Potential of Therapeutic FVIII Proteins in Hemophilia. A. J. Thromb. Haemost., 18: 201– 216. https://doi.org/10.1111/jth.14647. PubMed PMID: 315556206.

14. **Kumar S**, Espinosa EC, Leandro AC, Curran JE, Blangero J (2019). microRNA and mRNA interactions in induced pluripotent stem cell reprogramming of lymphoblastoid cell lines. Am. J. Stem Cells., 8(2):28-37. Epub 2019/09/17. PubMed PMID: 31523484; PMCID: PMC6737382.

15. Hanson RL, Safabakhsh S, Curtis JM, Hsueh WC, Jones LI, Aflague TF, Duenas Sarmiento J, **Kumar S**, Blackburn NB, Curran JE, Mahkee D, Baier LJ, Knowler WC, Nelson RG (2019). Association of CREBRF variants with obesity and diabetes in Pacific Islanders from Guam and Saipan. Diabetologia., 62(9):1647-52. Epub 2019/07/08. doi: 10.1007/s00125-019-4932-z. PubMed PMID: 31280340; PMCID: PMC6721609.

16. Blackburn NB, Michael LF, Meikle PJ, Peralta JM, Mosior M, McAhren S, Bui HH, Bellinger MA, Giles C, **Kumar S**, Leandro AC, Almeida M, Weir JM, Mahaney MC, Dyer TD, Almasy L, VandeBerg JL, Williams-Blangero S, Glahn DC, Duggirala R, Kowala M, Blangero J, Curran JE (2019). Rare DEGS1 variant significantly alters de novo ceramide synthesis pathway. J. Lipid Res., 60(9):1630-9. Epub 2019/06/23. doi: 10.1194/jlr.P094433. PubMed PMID: 31227640; PMCID: PMC6718439.

17. Johnson MP, Keyho R, Blackburn NB, Laston S, **Kumar S**, Peralta J, Thapa SS, Towne B, Subedi J, Blangero J, Williams-Blangero S (2019). Glycated Serum Protein Genetics and Pleiotropy with Cardiometabolic Risk Factors. J. Diabetes Res., 2019:2310235. Epub 2019/05/16. doi: 10.1155/2019/2310235. PubMed PMID: 31089471; PMCID: PMC6476113.

18. **Kumar S**, Curran JE (2018). Human Genome Project. The SAGE Encyclopedia of Intellectual and Developmental Disorders. Braaten EB. (eds). SAGE Publications, Thousand Oaks, CA, pp. 766-769, 2018. doi.org/10.4135/9781483392271. *By subscription: http://sk.sagepub.com/reference/the-sage-encyclopedia-of-intellectual-and-developmental-disorders/i8365.xml*

19. Arya R, Escalante A, Farook VS, Restrepo JF, Battafarano DF, Almeida M, Kos MZ, Fourcaudot MJ, Mummidi S, **Kumar S**, Curran JE, Jenkinson CP, Blangero J, Duggirala R, Del Rincon I (2018). Data on genetic associations of carotid atherosclerosis markers in Mexican American and European American rheumatoid arthritis subjects. Data. Brief., 17:820-9. Epub 2018/03/13. doi: 10.1016/j.dib.2018.02.006. PubMed PMID: 29527544; PMCID: PMC5842364.

20. Arya R, Escalante A, Farook VS, Restrepo JF, Battafarano DF, Almeida M, Kos MZ, Fourcaudot MJ, Mummidi S, **Kumar S**, Curran JE, Jenkinson CP, Blangero J, Duggirala R, Del Rincon I (2018). A genetic association study of carotid intima-media thickness (CIMT) and plaque in Mexican Americans and European Americans with rheumatoid arthritis. Atherosclerosis., 271:92-101. Epub 2018/02/27. doi: 10.1016/j.atherosclerosis.2017.11.024. PubMed PMID:

29482039; PMCID: PMC5886018.

21. **Kumar S,** Bhasin MK (2018). DNA fingerprinting and profiling. J. Hum Ecol., 63(1-3):9-33. doi: 10.31901/24566608.2018/63.1-3.3056. *Free Article: http://krepublishers.com/02-Journals/JHE/JHE-63-0-000-18-Web/JHE-63-1-3-000-18-Abst-PDF/JHE-63-1-3-009-18-3056-Kumar-S/JHE-63-1-3-009-18-3056-Kumar-S-Tx[2].pmd.pdf*

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Spector TD, Laakso M, Strom TM, Bell GI, Blangero J, Duggirala R, Tai ES, McVean G, Hanis CL, Wilson JG, Seielstad M, Frayling TM, Meigs JB, Cox NJ, Sladek R, Lander ES, Gabriel S, Mohlke KL, Meitinger T, Groop L, Abecasis G, Scott LJ, Morris AP, Kang HM, Altshuler D, Burtt NP, Florez JC, Boehnke M, McCarthy MI (2017). Sequence data and association statistics from 12,940 type 2 diabetes cases and controls. Sci. Data., 4:170179 (20 pages). Epub 2017/12/20. doi: 10.1038/sdata.2017.179. PubMed PMID: 29257133; PMCID: PMC5735917.

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6. Xaviour D, Yaseen SS, **Kumar S**, Vijayendra BR. (2007) Health profile of Betta Kuruba Tribe of Mysore district, Karnataka. In T. Subramanyam Naidu (Eds): Tribal Health in India: Problems and Future Perspectives (pp 81-91). Puducherry, Dept. Anthropology, Pondicherry University.
7. **Kumar S**, Yaseen SS, Xaviour D, Vijayendra BR. (2007) Health status of Jenu Kuruba primitive tribe of Mysore district, Karnataka. In T. Subramanyam Naidu (Eds): Tribal Health in India: Problems and Future Perspectives (pp 65-80). Puducherry, Dept. Anthropology, Pondicherry University.
8. **Kumar S.** (2007) Concept of DNA and RNA. In M.K Bhasin et al. (Eds) ebook: Fundamentals of Human Genetics and Human Growth. National Digital Science Library at National Institute of Science Communication and Information Resources (NISCAIR), Government of India, India. http://nsdl.niscair.res.in/jspui/handle/123456789/242.
9. Bhasin MK, **Kumar S.** (2006) Human blood analysis: Review of leukocyte typing, DNA fingerprinting & profiling. In: M.K. Bhasin, S. Nath and V.N. Sehgal (Eds): Studies in Forensic Science-02: Human Blood Analysis (pp 91-169). Kamala Raj Enterprises, Delhi (2006).
10. **Kumar S**, Bhasin MK. (1999) Biology of the people of Rajasthan. In: M.K. Bhasin and Veena Bhasin (Eds.) Rajasthan: Ecology, Culture and Society (pp 43-64). Kamla-Raj Enterprises, Delhi.
11. **Kumar S**, Kumbnani HK. (1998**)** A study of sex chromatin among the Rajput females of Sirmaur District, Himachal Pradesh. In. M.K. Bhasin and S.L. Malik (Eds) Contemporary Studies in Human Ecology: Human Factor, Resource Management and Development (pp 367-371). Indian Society Hum. Ecol, Delhi.

Book Reviews

1. **Kumar SY**. Book Review [Review of the book "Chromosomal Abnormalities and Genetic Counseling, 3rd Edition by RJ McKinlay Gardner and GR Sutherland. Oxford Univ. Press Inc. (2004)]. Int J Hum Genet. 2006; 6(3): 275-276
2. **Kumar S.** Book Review [Review of the book Human Growth: Assessment and Interpretation by AF Roche and SS Sun (formerly Guo). Cambridge University Press, Cambridge (2005)]. J Hum Ecol. 2005; 17 (1): 67-69.
3. **Kumar S.** Book Review [Review of the book Lowly Origin: Where, When and Why Our Ancestors First Stood Up, by J Kingdon. Princeton University Press, Princeton, and Oxford, New Jersey (2003)]. J Hum Ecol. 2005; 17 (2): 159-160.
4. **Yadav S.** Book Review [Review of the book God – Apes and Fossil Men:

Paleoanthropology in South Asia, by Kenneth AR Kennedy. The University of Michigan Press, (2000)]. J Hum Ecol. 2003; 14 (5):403-404.

5. **Kumar S.** Book Review [Review of the book Genomic Diversity: Applications in Human Population Genetics by SS Papiha, R Deka, and R Chakraborty. Kluwer Academic/Plenum Publishers, New York (1999)]. J Hum Ecol. 2004; 15 (4): 299-300.
6. **Kumar S.** Book Review [Review of the book Adaptation to Malaria: The Interaction of Biology and Culture, by LS Greene and ME Danubio. Gordon and Breach Publishers, The Netherlands, (1997)]. J Hum Ecol. 1999; 10 (5-6): 447-448.

Conference Presentations

1. **Kumar S**, Aceves M, Granados JC, Guerra L, Leandro AC, Peralta JM, Williams-Blangero S, Curran JC, Blangero J (2024). Developmentally driven gene program in fat depot-specific adipogenesis. (Poster presentation PB15050T; Complex Traits and Polygenic Disorders Poster Thursday Session) Presented at the 2024 Annual Meeting of the American Society of Human Genetics, November 5-9, 2024, Denver, CO.
2. **Kumar S**, Curran J, Granados J, Aceves M, Leandro A, Peralta J, Williams-Blangero S, Glahn D, Blangero J (2023). Functional genomic analysis of rs73352950: A rare, major depressive disorder (MDD) risk variant in Mexican Americans. (Poster presentation PB1113; Session: Molecular Effects of Genetic Variation Poster Session III) Presented at the 2023 Annual Meeting of the American Society of Human Genetics, November 1-5, 2023, Washington DC.
3. **Kumar S**, Aceves M, Granados JC, Leandro AC, Peralta JM, Williams-Blangero S, Curran JC, Blangero J (2023). Neurocellular ER Stress Response in Alzheimer's Disease and Related Dementias (ADRD) Risk. (Podium presentation; Oral presentation session #3; September 8, 2023). Presented at the UTRGV School of Medicine Annual Research Symposium 2023 – International conference on health disparities: psychiatric and medical comorbidities related to opioid and alcohol use disorders (ICHD-RECOVER II) September 8-9, 2023, Mission Event Center, Mission, TX.
4. **Kumar S**, Curran JE, Granados JC, De Leon E, Thomas J, Williams-Blangero S, Blangero J (2022). Pre-infection antiviral innate immunity attenuate SARS-CoV-2 infection and viral load in iPSC-derived alveolar epithelial cells type-2. (Poster presentation; Poster board number PB1594) Presented at the 2022 Annual Meeting of the American Society of Human Genetics, October 25-29, 2022, Los Angeles, CA
5. **Kumar S**, Curran JE, De Leon E, Granados JC, Leandro AC, Leandro M, Peralta JM, Williams-Blangero S, Blangero J (2021). Identification of hepatocellular gene expression phenotypes influencing fatty liver disease in Hispanics. (Poster presentation; Program # 3269; October 18, 2021). Presented at the 2021 Annual Virtual Meeting of the American Society of Human Genetics,

October 18-22, 2021.

6. **Kumar S**, Curran JE, De Leon E, Granados JC, Leandro AC, Leandro M, Peralta JM, Williams-Blangero S, Blangero J (2021). Non-alcoholic fatty liver disease and hepatocellular carcinoma risk associated gene expression phenotypes in Hispanics; (Oral presentation). Presented at the UTRGV School of Medicine 4th Annual Research Symposium 2021 – International conference on cancer health disparities (ICCHD), August 13-14, 2021, Harlingen Convention Center, Harlingen, TX.
7. **Kumar S,** Curran J, Peralta JM, Leandro AC, Lehman DM, Glahn DC, Blangero J (2019). Identifying the role of genetics and neurodevelopment in sporadic late onset Parkinson's disease. (Podium presentation; Program #256; session #72: Integrated Genomics and Transcriptomics in Parkinson's Disease; October 18, 2019). Presented at the 2019 Annual Meeting of the American Society of Human Genetics, October 18, 2019, Houston, TX
8. **Kumar S,** Blackburn, NB, Leandro AC, Leandro M, Peralta JM, Blangero J, Curran JE (2019). Human iPSC-derived hepatocytes reveal the functional consequences of an Hispanic rare sequence variant in the DEGS1 gene; (Flash Talk and Poster Presentation # FSO-FT3 & FSO-30; September 14, 2019). Presented at the UTRGV School of Medicine 3rd Annual Research Symposium 2019 – Health Disparities: Community Engagement, September 14, 2019, McAllen Convention Center, McAllen, TX
9. **Kumar S,** Curran JE, Espinosa EC, Lehman DM, Duggirala R, Glahn DC, Blangero J (2018). Utility of iPSC generated NSCs in modeling complex neurological disorders: from candidate gene prioritization to gene validation; (Podium Presentation; Plenary Session #3 - Translational Science; September 15, 2018). Presented at the UTRGV School of Medicine Research Symposium – Health Disparities 2018: Closing the Gap, September 15, 2018, McAllen Convention Center, McAllen, TX.
10. **Kumar S,** Curran J, Lehman DM, Duggirala R, Glahn D, Blangero J. (2017). Parkinson's disease gene identification using differential gene expression analysis of iPSC generated neural stem cells; (Podium presentation; Program #145; session #34: Genetic architecture of neurological traits; October 19, 2017). Presented at the American Society of Human Genetics 67th Annual Meeting, October 17-21, 2017, Orlando, FL
11. **Kumar S,** Curran J, Blangero J (2016). Role of microRNA in LCL to iPSC reprogramming; (Podium presentation; HGM16-ABS-1084; February 29, 2016). Presented at the HUGO's Human Genome Meeting 2016 (HGM2016), February 28 – March 2, 2016, Houston TX
12. **Kumar S,** Curran J, Blangero J (2014). microRNA profiling of human lymphoblastoid, iPS, and neural stem cell lines shows overlapping but distinct expression patterns; (ASHG14-537T; October 19, 2014). Presented at the American Society of Human Genetics 64th Annual Meeting, October 18-22, 2014 San Diego, CA.

13. **Kumar S** (2013). Sample collection and nucleic acid extraction. An invited lecture at the Application of Genomics to Anthropological Research (AGAR 2013) workshop (January 10, 2013). Organized by Texas Biomedical Research Institute and American Association of Anthropological Genetics, January 10-11, 2013, San Antonio, TX
14. **Kumar S,** Bellis C, Johnson MP, Goring HHH, Dyer TD, Blangero J, Curran JE (2012). Experimental depletion and regeneration of human mitochondrial DNA to investigate its role in nuclear gene regulation; (ASHG12-533F; November 9, 2012). Presented at the American Society of Human Genetics 62nd Annual Meeting, November 6-10, 2012, San Francisco, CA.
15. **Kumar S,** Curran JE, Carless MA, Drigalenko EI, Dyer TD, Johnson MP, Almasy L, Moses EK, Goring HH, Mahaney MC, Blangero J (2010). Identification of a novel gene influencing total antioxidant status using an integrative genomic approach; (ASHG10-1115/F; November 5, 2010). Presented at the American Society of Human Genetics 60th Annual Meeting, November 2-6, 2010, Washington, DC
16. **Yadav Kumar S**, Rao VR (2008) Going India to Australia: New genetic evidence on modern human colonization; (HGM2008-ABS-164; September 29, 2008). Presented at the Human Genome Meeting 2008 (HGM2008), September 27-30, 2008, Hyderabad, India
17. **Kumar S,** Phylogeny group AnSI (2007). The internal structure of M2 lineage among Indian tribes; (P101; February 15, 2007). Presented at the XXXII Annual Conference of Indian Society of Human Genetics and International symposium on “Deconstructing Human Diseases: The Genomic Advantage”, February 14-16, 2007 Kolkata, India

Research Grants

Current

RM1GM149403 Curran/Blangero/Jacob/Kumar/Parsons (PIs) 8/1/2023 – 7/30/2027
NIH/NIGMS
Experimental Cellular Approaches to Genotype × Environment Interaction.
The major goal of this project is to use iPSC-derived cells in experimental tests of GEI in relation to pollution and neurotoxins.
Role: Multi-Principal Investigator (MPI)

U54HG013247 William-Blangero (PI) Curran/Kumar (Project Lead) 9/15/2023 – 9/1/2027
NIH/NHGRI
UTRGV Center for Genome Research: Project 1-Hepatocellular Genetic Epidemiology of Fatty Liver Disease in Hispanics.
The goal of Project 1 is to identify genetic determinants of nonalcoholic fatty liver disease (NAFLD) risk.

Role: Project 1 Co-Leader

Recently Completed Grants

R21 OD026625 Vandeberg/Kumar (PIs) 08/15/19 – 08/31/23
NIH/OD
Laboratory Opossum iPSC Lines for Biomedical Research
Role: Multi-Principal Investigator (MPI)

510000000 Williams-Blangero (PI) 03/01/20 – 02/28/23
Valley Baptist Legacy Foundation
THRIVE: A unique medical hub for improving health through advanced research and clinical care for the Rio
Grande Valley; Component: Regenerative Center
Role: Component Lead- Regenerative Center