November 26, 2019

CURRICULUM VITAE

KUNAL RAY

Mailing Address: G9, New Garia Housing Cooperative Housing Society, Panchasayar, Kolkata – 700 094, INDIA

Mobile: 91 98118 74348 / 91 94330 90088

email: kunalray@gmail.com and kunalray@acsir.res.in

Homepage : https://sites.google.com/site/drkunalray/

Date of Birth: July 19, 1952

Family: *Wife:* Prof. Jharna Ray (retired), Prof. & Executive Director, SN Pradhan Centre for Neurosciences, Calcutta University, Kolkata, India;

Daughter: Dr. Ananya Ray-Soni – Post-Doc, Mass General Hospital & Harvard Medical School, Boston, USA)

Academic Background:

Degree	University	Year
B. Sc. (Chemistry Hons.)	Calcutta University	1972
M. Sc. (Biochemistry)	Calcutta University	1974
Ph. D. (Biochemistry) Work done at Bose Institute, Kolkata	Calcutta University	1981

Current Actiivities:

Dec ’17 – to date Hony, Director, Sahaj Path Knowledge Foundation, Salt Lake, Kolkata
May ’18 – to date Director (R & D), ATGC Diagnostics Pvt. Ltd, Park Circus, Kolkata

Professional Background:

Aug.’16-Sept.’17 Director (Officiating),
Academy of Scientific and Innovative Research, Ghaziabad, UP

Feb.’13-Aug.‘16 Associate Director,
Academy of Scientific and Innovative Research, New Delhi

Nov. ’12-Jan ‘13 Consultant, CSIR-Indian Institute of Chemical Biology (CSIR-IICB)
Innovation Complex, Kolkata, India

Oct.’11-July’12 Chief Scientist, Molecular & Human Genetics Division,
CSIR-IICB, Kolkata, India *and*
Professor, Academy of Scientific and Innovative Research

Jul.’09-Jul.’12 Professor & Associated Dean (Biological Sciences), Academy of Scientific and Innovative Research at CSIR-IICB, Kolkata

Oct.’06-Oct.’11 Senior Principal Scientist, Molecular & Human Genetics Division,
CSIR-IICB, Kolkata, India

Oct.’02-Sept.’06 Scientist EII, Molecular & Human Genetics Division,
CSIR-IICB, Kolkata, India

Oct.'98-Sept. '02	Scientist EI and Coordinator of Human Genetics & Genomics Division, CSIR-IICB, Kolkata, India
April '93-Oct.'98	Research Associate Professor, Baker Institute for Animal Health, Cornell University, College of Veterinary Medicine, Ithaca, New York, USA
July '87-March '93	Research Assistant Professor, Department of Medicine, University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania, USA
June'82-June'87	Research Associate, Departments of Human Genetics and Ophthalmology, University of Pennsylvania School of Medicine, USA
Dec. 81-May 82	Post-doctoral Fellow, St. Louis University, School of Medicine, St. Louis, Missouri, USA

Memberships in Professional and Scientific Societies:

Human Genome Organization (HUGO), UK

Society of Biological Chemists, India (Life member)

Indian Biophysical Society (Life member)

Indian Science Congress Association (Life member)

Indian Academy of Neurosciences (Life member)

Indian Society of Human Genetics (Life member)

Proteomics Society, India (Life member)

Molecular Pathology Association of India (Life member)

Calcutta Consortium of Human Genetics (Life member)

Honors / awards / distinctions /citations/ fellowships etc.:

(a) LD Sanghvi Oration 2019 (for outstanding contribution in Human Genetics)
Annual Conference of Indian Society of Human Genetics

(b) Elected Member of DBT - Task Force
Task Force on Human Genetics & Genomics Analysis

(c) Elected Fellow
The National Academy of Sciences, India, 2012

(d) Elected Associate Dean (Biological Sciences),
Academy of Scientific and Innovative Research (AcSIR), 2010 - 2012

(e) Dr. R. N. Chatterjee Oration Lecture
The Annual Meeting of Association of Neuroscientists of Eastern India, November 30, 2008

(f) Dr. Debasis Bhattacharya Centenary Lecture
The Visva Bharati Univeristy, Shantiniketan, West Bengal on November 9, 2008

(g) Elected Associate Editor
The Journal of Genetics (Springer) published by the Indian Academy of Sciences, since 2008

(h) Elected Member of Editorial Board
The Indian Journal of Animal Health, since 2008

(i) Elected member
Guha Research Conference, 2007

(k) Elected Fellow
The West Bengal Academy of Science & Technology, 2006
for 'outstanding contribution in the field of Human Genetics'.

(l) Elected member
Human Genome Organization (HUGO), London, 2006

(m) Delivered Dr. Samir Kumar Biswas Memorial Oration 2005
organized by Opthalmological Society of West Bengal on July 31, 2005.

(n) Received Dr. Kalidas Bhattacharyya Memorial Award 2005
in recognition of commendable community Eye Health Care service in the Indian Subcontinent (awarded by the Indian Alumni Group of International Centre for Eye Health, London).

Patent awarded:

(a) *United States Patent* (no. US6201114); *Date of Patent:* March 13, 2001; *Inventors:* Gustavo Aguirre, Gregory Acland, and **Kunal Ray**; *Assignee:* Cornell Research Foundation, Inc.; Title of Patent: Identification of congenital stationary night blindness in dogs.

(b) *United States Patent* (no. 5,804,388); *Date of Patent:* Sept. 8, 1998; *Inventors:* Gustavo Aguirre, Gregory Acland, and **Kunal Ray**; *Assignee:* Cornell Research Foundation, Inc.; *Title of Patent:* Chromosome 9 and progressive rod-cone degeneration disease genetic markers and assays.

Specialization:

Molecular Genetics, Molecular Biology, Protein Biochemistry

Research Interest:

Molecular bases of genetic diseases with special interest in hematological, neurological and ocular diseases

Research Experience:

(a) Protein-ligand binding studies using tubulin and colchicine & its analogues

(b) Protein biochemistry of multicatalytic protease complex,

(c) Molecular evolution of multigene families,

(d) Molecular genetics of hypophosphatasia - a disease caused by defect in alkaline phosphatase gene,

(e) Molecular genetics of retinitis pigmentosa (an inherited eye disorder) in animal models

(f) Molecular genetics of hematological (hemophilia), neurological (Wilson's disease, Parkinson's disease) and ocular (Glaucoma and Ocuocutaneous albinism) diseases common among Indians

Teaching Experience:

(a) Teaching IICB PhD program course in Genomics.

(b) An honorary lecturer and examiner of the M. Sc. (Biotechnology), M. Sc. (Neuroscience), M. Sc. (Genetics), Calcutta University. Teach Medical Genetics.

(c) UGC sponsored courses in Calcutta University, Visva Bharati University and Kalyani University;

(c) Lectures in National Institute of Pharmaceutical Education & Research, Kolkata

Editorial responsibilities in peer reviewed journals:

Associate Editor of Journal of Genetics (Publisher: Springer)

PhD students:

Students completing PhD	*Year*	*Current Assignment*
(1) Arijit Mukhopadhyay	2004	Reader, university of Salford, Manchester, UK
(2) Late Saibal Mukherjee	2006	Was Asst Prof. at Calcutta University
(3) Moulinath Acharya	2007	Asst Prof., National Institute of Biomedical Genomics, Kalyani, West Bengal
(4) Arnab Gupta	2007	Assistant Prof., IISER-Kolkata
(5) Moumita Chaki	2008	Associate Director, Otsuka Pharmaceutical Companies, USA
(6) Pritha Ghosh*	2008	Asst. Professor, Calcutta University
*(*Joint supervisor with Dr. Ashok Giri)*		
(7) Ashima Bhattacharjee	2009	Associate Professor, Amity University, Kolkata
(8) Sudhhasil Mookkherjee	2010	Scientist 1, MedImmune, Rockville, Maryland, USA
(9) Mainak Sengupta	2010	Asst. Professor, Calcutta University
(10) Arindam Biswas[#]	2010	Res Associate, Calcutta University
([#]Associate supervisor with Prof. Jharna Ray, Calcutta University)		
(11) Atreyee Saha	2011	Senior Scientist, DNA Electronics, UK
(12) Tufan Naiya[#]	2011	Teaching in College
([#]Associate supervisor with Prof. Jharna Ray, Calcutta University)		
(13) Deblina Banerjee	2012	PDF, Georgetown University, Washington DC, USA
(14) Subhodip Chakraborty	2014	Assistant Professor, West Bengal College Service Commission
(15) Maitreyee Mondal	2014	Lecturer, Dinabandu Andrews College, Kolkata
(16) Shashwata Mukherjee*	2015	Assistant Professor, Kalyani Mahavidyalaya, Kalyani
*(*Joint supervisor Prof. Jharna Ray, Calcutta University)*		
(17) Sanchari Pradhan*	2015	Project Manager, ICGC, NIBMG, Kalyani
*(*Joint supervisor with Dr. Chitra Dutta, IICB)*		
(18) Sarmistha Sinha*	2015	Teacher, Garden High School, Kolkata
*(*Joint supervisor Dr. Rukhsana Chowdhury, IICB)*		
(19) Mansi Vishal*	2016	Senior Genetic Counselor, Strand Life Sciences – HCG, Ahmedabad, Gujrat
*(*Joint supervisor Dr. Arijit Mukhopadhyay, IGIB, Delhi)*		
(20) Kiran Narta*	2017	Postdoctoral Associate, University of Calgary, Canada
*(*Joint supervisor with Dr. Arijit Mukhopadhyay, IGIB, Delhi)*		

Current PhD students

(1) Subhrajit Roy* MSc

*(*Joint supervisor with Prof. Jharna Ray, Cal Univ, Kolkata)*

Participation in extramural activities & outreach programs:

(a) Routinely participated in the programs designed by CSIR and the institute to expose students (from school level to post-graduate level including CYPLS) to lab tour, demonstration and lectures.

(b) Raise public awareness regarding genetic diseases in general and IICB's contribution in particular through print and audio media.

(c) Member (External Expert) Postgraduate Board for M.Sc. course in Genetics of Calcutta University

(d) Member (External Expert) Postgraduate Board for M.Sc. course in Neurosciences of Calcutta University

(e) Member (External Expert) Postgraduate Board for M.Sc. course in Biotechnology of Presidency College

(f) The UGC nominated member of the Advisory Committee for UGC-CAS program on 'Organismal and Functional Genomics' (Phase II) at Madurai-Kamraj University.

(g) Member of Monitoring Committee for National Fund for Basic & Strategic Research (NFBSRA) Project on 'Endocrine Profiles and Characterization of Candidate Genes Influencing Prolificacy in Black Bengal Goat'.

(h) Evaluate research proposals submitted to DST, DBT, ICMR, CSIR etc. for funding.

(i) Evaluate PhD thesis from various academic institution including: IGIB, CDRI, CCMB, Gurunank Dev University, University of Pune, University of Hyderabad, JNU, BITS-Pillani, JNCASR etc.

(j) Honorary Secretary, West Bengal Academy of Science & Technology (2009 - 2012)

(k) Advisor, Society of Biological Chemist, India (Kolkata Chapter)

(l) Ex-President, Calcutta Consortium of Human Genetics

(m) Served in the Research Advisory Board of National Institute of Biomedical Genomics (NIBMG), Kalyani, West Bengal

(n) Member, Advisory Council of Public Health Foundation of India (PHFI)

Societal benefit from the studies undertaken on human diseases:

(a) Identification of prevalent mutations in population groups of India helps to identify carriers and presymptomatic individuals.

(b) Such endeavor helps to control propagation of the defective chromosome in the population and better management of the presymptomatic individuals in diseases where treatment can prevent or slow down the disease.

(c) A recent creation of Indian Genetic Disease Database is a unique effort which has been published in Nucleic Acids Research as a Featured Article. The IGDD web portal, planned to be made freely available, contains user-friendly interfaces and is expected to be highly useful to the geneticists, clinicians, biologists and patient support groups of various genetic diseases.

(d) The published study has been widely covered in popular press for societal benefit of the studies.

Financial Support for Research:

(1) Project Title:	Determination of heterozygosity of intragenic markers and detection of mutations in factor IX gene in Indian population
Funding Agency:	DST (Rs 18.22 lakhs; 2000-2003)
Role:	Principal Investigator
(2) Project Title:	Molecular Characterization of Wilson Disease in Indian Population
Funding Agency:	ICMR (Rs 29.8 lakhs; 2002-2005)
Role:	Principal Investigator
(3) Project Title:	Novel molecular diagnostics for eye diseases and low vision enhancement devices
Funding Agency:	CSIR: New Millennium Indian Technology Leadership Initiative (NMITLI) program (Rs 32 lakhs; 2003-2006)
Role:	Principal Investigator
(4) Project Title:	Predictive medicine using repeat and single nucleotide polymorphisms (Nodal Lab: IGIB, Delhi)
Funding Agency:	CSIR (Mission mode program, 10th Five Year Plan)
Fund for IICB:	Rs 318 lakhs; 2002-2007
Role:	Nodal Scientist with 5 other participating scientists
(5) Project Title:	Toxicogenomics: Genetic polymorphism in Indian population to industrial chemicals, and development of biomarkers (Nodal Lab: ITRC, Lucknow)
Funding Agency:	CSIR (Mission mode program, 10th Five Year Plan)
Fund for IICB:	Rs 436 lakhs; 2002-2007
Role:	One of four participating scientists
(6) Project Title:	Genome wide study to uncover molecular basis of neurodegerneration in glaucoma (Nodal Lab: IICB, Kolkata)
Funding Agency:	CSIR (non-network project between IICB & IGIB, 11th Five Year Plan)
Fund for IICB:	Rs 251.280 Lakhs; 2008-2010
Role:	Nodal scientist
(7) Project Title:	Supra-institutional project on “Evaluation and correction of mitochondrial dysfunction in disease” (Lab: IICB, Kolkta)
Funding Agency:	CSIR (11th Five Year Plan)
Fund for IICB:	Rs 1650 lakhs; 2007-2012
Role:	One of six participating scientists
(8) Project Title:	Plasma proteomics: Health, Environment and Disease (Nodal Lab: IITR, Lucknow)
Funding Agency:	CSIR (11th Five Year Plan)
Fund for IICB:	Rs 625 lakhs; 2007-2012
Role:	One of five participating scientists

Publication Details:

[Citation by Google Scholar: No. of Citation: 7758; h-index: 42; i10-index: 157 as on 26-Nov-2019]

2019

1. Ghosh A, Sadhukhan T, Giri S, Biswas A, Das SK, **Ray K**, Ray J. Dopamine β Hydroxylase (DBH) is a potential modifier gene associated with Parkinson's disease in Eastern India. ***Neuroscience Letters***. 706:75-80, 2019.
2. Giri S, Naiya T, Roy S, Das G, Wali GM, Das SK, **Ray K**, Ray J. A Compound Heterozygote for GCH1 Mutation Represents a Case of Atypical Dopa-Responsive Dystonia. ***Journal of Molecular Neuroscience***, 68(2):214-220, 2019.
3. Pal P, Sadhukhan T, Chakraborty S, Sadhukhan S, Biswas A, Das SK, **Ray K**, Ray J. Role of Apolipoprotein E, Cathepsin D, and Brain-Derived Neurotrophic Factor in Parkinson's Disease: A Study from Eastern India. ***NeuroMolecular Medicine***, May 2019 [Epub ahead of print].
4. Roy S, Ghosh S, Bhattacharya S, Saha A, Das S, Gangopadhyay P, Bavdekar A, **Ray K**, Sengupta M; Ray J. Dopamine β hydroxylase (DBH) polymorphisms do not contribute towards the clinical course of Wilson's disease in Indian patients. ***The Journal of Gene Medicine***, June 2019 (in press).
5. Giri S, Biswas A, Das SK, **Ray K**, Ray J. Primary generalized dystonia due to *TOR1A* ΔGAG mutation in an Indian family with intrafamilial clinical heterogeneity. ***Neurology India***, (in press) 2019.

2018

1. Gupta A, Das S, **Ray K**; A glimpse into the regulation of the Wilson disease protein, ATP7B, sheds light on the complexity of mammalian apical trafficking pathways, ***Metallomics***;10(3):378-387, 2018.
2. Roy S., Ganguly K., Pal P., Ghosh S., Das S.K., Gangopadhyay P.K., Bavdekar A., **Ray K.**, Sengupta M. and Ray J. Influence of Apolipoprotein E polymorphism on susceptibility of Wilson disease. ***Annals of human genetics***, *82*(2), 53-59, 2018.
3. Sadhukhan D., Das G., Biswas A., Ghosh S., Das S.K., **Ray K.** and Ray J. Evaluation of FGF20 variants for susceptibility to Parkinson's disease in Eastern Indians. ***Neuroscience letters***, *675*,.68-73, 2018.
4. Roy S, Pal P, Ghosh S, Bhattacharya S, Das SK, Gangopadhyay PK, Bavdekar A, **Ray K**, Sengupta M, Ray J. Potential role of Brain Derived Neurotrophic Factor and Dopamine receptor D2 variants modify the susceptibility and clinical course of Wilson's disease. ***NeuroMolecular Medicine***, 20(3):401-408, 2018
5. Bavdekar, A, Gupta A, **Ray K**, Wilson's disease in India, Chapter 32 in ***Clinical and Translational Perspective on Wilson Disease***, editors, Nanda Kerkar, Eve A. Robert (Publisher: ELSEVIER); (in press), 2018

2017

1. Ganguly K, Dutta T, Samanta S, Sil A, **Ray K**, and Sengupta M. C10ORF11 is Unlikely to have a Major Contribution towards OCA Pathogenesis in Southern and Eastern India, ***Journal of Human Biology & Health Education***, 1: 003, 2017
2. Giri S, Naiya T, Equbal Z, Sankhla C S, Das S K, **Ray** K, Ray J. Genetic screening of THAP1 in primary dystonia patients of India. ***Neuroscience Letters***, 637: 31-37, 2017.

2016

1. Banerjee A, Chakraborty S, Chakraborty A, Chakrabarti S, **Ray K**. Functional and Structural Analyses of CYP1B1 Variants Linked to Congenital and Adult-Onset Glaucoma to Investigate the Molecular Basis of These Diseases, ***PLoS One***, 2016 May 31;11(5):e0156252. doi: 10.1371/journal.pone.0156252. eCollection 2016 [PMID: 27243976]
2. Mondal M, Sengupta M, **Ray K**. Functional assessment of tyrosinase variants identified in albinos is essential for unequivocal determination of genotype to phenotype correlation, ***British Journal of Dermatology***, 2016, doi: 10.1111/bjd.14977, [PMID: 27537549].
3. Mookherjee S, Banerjee D, Chakraborty S, Mukhopadhyay I, Sen A, **Ray K**. Evaluation of the IL1 Gene Cluster Single Nucleotide Polymorphisms in Primary Open-Angle Glaucoma Pathogenesis, ***Genet Test Mol Biomarkers***, 2016 Aug 17. [Epub ahead of print] [PMID: 27533638]

4. Giri S, Naiya T, Equbal Z, Sankhla CS, Das SK, **Ray K**, Ray J. Genetic Screening of THAP1 in Primary Dystonia Patients of India, ***Neuroscience Letters***, 2016 Nov 29. pii: S0304-3940(16)30928-4. doi: 10.1016/j.neulet.2016.11.060. [Epub ahead of print] [PMID: 27913194]
5. Kaurani L, Vishal M, Ray J, Sen A, **Ray K**, Mukhopadhyay A. TBK1 duplication is found in normal tension and not in high tension glaucoma patients of Indian origin, ***Journal of Genetics*** 2016 Jun;95(2):459-61[PMID: 27350692]
6. Jaiswal SR, Zaman S, Chakrabarti A, Sen S, Mukherjee S, Bhargava S, **Ray K**, O'Donnell PV, Chakrabarti S. Improved Outcome of Refractory/Relapsed Acute Myeloid Leukemia after Post-Transplantation Cyclophosphamide-Based Haploidentical Transplantation with Myeloablative Conditioning and Early Prophylactic Granulocyte Colony-Stimulating Factor-Mobilized Donor Lymphocyte Infusions. ***Biol Blood Marrow Transplant***. 2016 Oct;22(10):1867-73. doi: 10.1016/j.bbmt.2016.07.016. Epub 2016 Jul 25. [PMID: 27470289]
7. Jaiswal SR, Chakrabarti A, Chatterjee S, **Ray K**, Chakrabarti S. Haploidentical transplantation in children with unmanipulated peripheral blood stem cell graft: The need to look beyond post-transplantation cyclophosphamide in younger children, ***Pediatr Transplan***t. 2016 Aug;20(5):675-82. doi: 10.1111/petr.12724. Epub 2016 May 24. [PMID: 27217372]
8. Jaiswal SR, Chakrabarti A, Chatterjee S, Bhargava S, **Ray K**, Chakrabarti S. Hemophagocytic syndrome following haploidentical peripheral blood stem cell transplantation with post-transplant cyclophosphamide. ***International Journal of Hematology***, 103(2):234-42, 2016, doi: 10.1007/s12185-015-1905-y. Epub 2015 Nov 30 [PMID: 26619832]
9. Jaiswal SR, Chakrabarti A, Chatterjee S, Bhargava S, **Ray K**, O'Donnell P, Chakrabarti S. Haploidentical Peripheral Blood Stem Cell Transplantation with Post-Transplantation Cyclophosphamide in Children with Advanced Acute Leukemia with Fludarabine-, Busulfan-, and Melphalan-Based Conditioning. ***Biology of Blood Marrow Transplantation***, 499-504, 22(3), 2016, doi: 10.1016/j.bbmt.2015.11.010. [PMID: 26612281]
10. Vishal M, Sharma A, Kaurani L, Alfano G, Mookherjee S, Narta K, Agrawal J, Bhattacharya I, Roychoudhury S, Ray J, Waseem NH, Bhattacharya SS, Basu A, Sen A, **Ray K**, Mukhopadhyay A. Genetic association and stress mediated down-regulation in trabecular meshwork implicates MPP7 as a novel candidate gene in primary open angle glaucoma, ***BMC Med Genomics***. 2016 Mar 22;9:15. doi: 10.1186/s12920-016-0177-6 [PMID: 27001270]
11. **Ray K**, Sengupta M, Ghosh S. TYRP1 (tyrosinase-related protein 1); ***Atlas of Genetics and Cytogenetics in Oncology and Haematology*** 2016. On line version: http://AtlasGeneticsOncology.org/Genes/TYRP1ID46370ch9p23.html
12. **Ray K**, Sengupta M, Ghosh S. SLC24A5 (solute carrier family 24 (sodium/potassium/calcium exchanger), member 5); ***Atlas of Genetics and Cytogenetics in Oncology and Haematology*** 2016. On line version: On line version http://AtlasGeneticsOncology.org/Genes/SLC24A5ID73332ch15q21.html
13. **Ray K**, Sengupta M, Ghosh S. C10orf11 (Chromosome 10 Open Reading Frame 11). ***Atlas of Genetics and Cytogenetics in Oncology and Haematology*** 2016. On line version: http://AtlasGeneticsOncology.org/Genes/C10orf11ID60852ch10q22.html
14. **Ray, K**; Sengupta, M; Ghosh, S. OCA2 (oculocutaneous albinism II), ***Atlas of Genetics and Cytogenetics in Oncology and Haematology***. 2016. On line version: http://AtlasGeneticsOncology.org/Genes/OCA2ID45789ch15q12.html9

2015

1. **Ray K**, Sengupta S, Ganguly K. Oculocutaneous Albinism. Atlas Genetics Cytogenetics in Oncology and Haemtology. 2015. Online version (http://atlasgeneticsoncology.org/Kprones/OculocutaneousAlbinismID10022.html)
2. Jaiswal SR, Chatterjee S, Mukherjee S, **Ray K**, Chakrabarti S. Pretransplant Sirolimus might improve the outcome of haploidentical peripheral blood stem cell transplantation with post-transplant cyclophosphamide for patients with severe Aplastic Anemia, ***Bone Marrow Transplantation***, 50(6):873-5, 2015 [PMID 25798678]
3. Sengupta M, Sarkar D, Ganguly K, Sengupta D, Bhaskar S, **Ray K**. In silico analyses of missense mutations in coagulation factor VIII: Identification of severity-determinants of haemophilia A. ***Haemophilia***, 21(5):662-9, 2015 [PMID 25854144]

2014

1. Giri S, Biswas A, Das SK, **Ray K**, Ray J. Molecular basis of DYT1 and DYT6 primary dystonia in Indian patients. ***Molecular Cytogenetics***, 7:P121, 2014
2. Giri S, Naiya T, Das S, Sankhla C, **Ray K**, Ray J. Genetic analysis of TOR1A & THAP1 genes in Indian primary dystonia patients. ***Movement Disorders***, 29, S70-S71, 2014
3. Vishal M, Sharma A, Kaurani L, Chakraborty S, Ray J, Sen A, Mukhopadhyay A, **Ray K.** Evaluation of Genetic Association of the INK4 Locus with Primary Open Angle Glaucoma in East Indian Population. ***Scientific Reports***, 4:5115, 2014 [PMID 24875940].
4. Kaurani L, Vishal M, Kumar D, Sharma A, Mehani B, Sharma C, Chakraborty S, Jha P, Ray J, Sen A, Dash D, **Ray K**, Mukhopadhyay A. Gene rich large deletions are overrepresented in POAG patients of Indian and Caucasian origins. ***Investigative Ophthalmology and Visual Sciences***, 55(5): 3258-64, 2014 [PMID: 24764060]
5. Sarkar D, **Ray K**, Sengupta M. Structure-function correlation analysis of Connexin50 missense mutations causing congenital cataract – electrostatic potential alteration could determine intracellular trafficking fate of mutants. ***BioMed Research International***, 673895, 2014 [PMID: 25003127]
6. Sinha S, Giri AK, Chowdhury R, **Ray K**. Mitochondrial genome variations among arsenic exposed individuals and potential correlation with apoptotic parameters, ***Environmental and Molecular Mutagenesis***, 55(1):70-76, 2014 [doi: 10.1002/em.21828; PMID: 24259294].
7. Mukherjee S, Dutta S, Majumdar S, Biswas T, Jaiswal P, Sengupta M, Bhattacharya A, Gangopadhyay PK, Bavdekar A, Das SK and **Ray K**. Genetic defects in Indian Wilson disease patients and genotype-phenotype correlation. ***Parkinsonism and Related Disorders***, 20(1):75-81, 2014 [doi: 10.1016/j.parkreldis.2013.09.021; PMID: 24094725]

2013

1. Das G, Sadhukhan T, Sadhukhan D, Biswas A, Pal S, Ghosh A, Das SK, **Ray K** and Ray J. Genetic study on frontotemporal lobar degeneration in India, ***Parkinsonism Related Disorders***, 19: 487–489, 2013 [DOI: 10.1016/j.parkreldis.2012.11.015; PMID: 23317568].
2. **Ray K**, Sengupta M. Oculocutaneous Albinism. ***Atlas of Genetics and Cytogenetics in Oncology and Haematology*** 17(1):65-69, 2013.
3. Sengupta M, Sarkar D, Mondal M, Samanta S, Sil A, **Ray K**. Analysis of MC1R variants in Indian Oculocutaneous Albinism patients: Highlighting the risk of skin cancer among the albinos. ***Journal of Genetics***, 92(2):305-8, 2013. [PMID: 23970088]
4. Banerjee D, Banerjee A, Mookherjee S, Vishal M, Mukhopadhyay A, Sen A, Basu A, **Ray K**. Mitochondrial genome analysis of primary open angle glaucoma patients, ***PLOS ONE***, 8(8):e70760, 2013 [PMID: 23940637]
5. Chakraborty S, Mookherjee S, Sen A, **Ray K**. Ananlysis of COCH and TNFA variants in east Indian Primary Open Angle Glaucoma patients. ***BioMed Research International***, 2013:937870, 2013 [doi: 10.1155/2013/937870]

2012

1. Banerjee D, Bhattacharjee A, Ponda A, Sen A, **Ray K**. Comprehensive analysis of myocilin variants in east Indian POAG patients. ***Molecular Vision*** 18:1548-1557, 2012 [PMID: 22736945]
2. Naiya T, Misra AK, Biswas A, Das SK, **Ray K**, Ray J. Occurrence of GCH1 gene mutations in a group of Indian dystonia patients. ***Journal of Neural Transmission***, 119(11), 1343-1350, 2012. [DOI: 10.1007/s00702-012-0777-z; PMID: 22373569]
3. Das G, Misra AK, Das SK, **Ray K**, Ray J. Role of tau kinases (*CDK5R1* and *GSK3B*) in Parkinson's disease: A study from India. ***Neurobiology of Aging***, 33(7):1485.e9-1485.e15, 2012 PMID: 21130530
4. Biswas A, Sadhukhan T, Bose K, Ghosh P, Giri AK, Das SK, **Ray K**, Ray J. Role of glutathione S-transferase T1, M1 and P1 polymorphisms in Indian Parkinson's disease patients. ***Parkinsonism Related Disorders***, 18(5):664-665, 2012. PMID: 21993019
5. Sadhukhan T, Vishal M, Das G, Sharma A, Mukhopadhyay A, Das SK, **Ray K**, Ray J. Evaluation of the role of LRRK2 gene in Parkinson's disease in an East Indian cohort, ***Disease Markers*** 32, 355–362, 2012. PMID: 22684232

6. Sadhukhan T, Biswas A, Das SK, **Ray K**, Ray J. *DJ-1* variants in Indian Parkinson's disease patients. ***Disease Markers***, 33(3), 127-135, 2012 [PMID: 22960331]
7. Basu K, Sen A, **Ray K**, Ghosh I, Datta K, Mukhopadhyay A. Genetic association and gene-gene interaction of *HAS2*, *HABP1* and *HYAL3* implicate hyaluronan metabolic genes in glaucomatous neurodegeneration, ***Disease Markers***, 33(3), 145-154, 2012 [PMID: 22960332]
8. Mookherjee S, Acharya M, Banerjee D, Bhattacharjee A and **Ray K**, Molecular basis for involvement of CYP1B1 in MYOC upregulation and its potential implication in glaucoma pathogenesis, ***PLOS ONE***, 7(9): e45077, 2012. [doi:10.1371/journal.pone.0045077; PMID: 23028769]
9. Mondal M, Sengupta M, Samanta, S, Sil A and **Ray K**, Molecular basis of albinism in India: evaluation of seven potential candidate genes and some new findings, ***GENE***, 511, 470-474, 2012.

2011

1. Pradhan S, Sengupta M, Dutta A, Bhattacharyya K, Bag, S, Dutta C and **Ray K**. Indian Genetic Disease Database. ***Nucleic Acids Research***, 39(Database issue): D933–D938, 2011, PMCID: PMC3013653.
2. Chaki M, Sengupta N, Mondal M, Bhattacharyya A, Mallick S, Bhadra R, Indian Genome Variation Consortium and Ray K. Molecular and functional studies on Tyrosinase variants: An implication towards Oculocutaneous Albinism type 1 (OCA1) among Indians. ***Journal of Investigative Dermatology***, Jan;131(1):260-262, 2011 PMID: 20861851
3. Mookherjee S, Chakraborty S, Vishal M, Banerjee D, Sen A, **Ray K**. WDR36 variants in East Indian primary open-angle glaucoma patients. ***Molecular Vision***, 2011;17:2618-27. Epub 2011 Oct 8. PMID: 22025897
4. **Ray K**, Mukhopadhyay A and Sengupta M. (2011) Gene discovery by direct genome sequencing in ***Gene Discovery for Disease Models***. ed. Weikuan Gu and Yongjun Wang; John Wiley & Sons, Inc. Hoboken, NJ, USA,doi: 10.1002/9780470933947.ch11 (Published Online 10 Feb 2012).

2010

1. Mookherjee S, Banerjee D, Chakraborty S, Banerjee A, Mukhopadhyay I, Sen A and **Ray K**, Association of IL1A and IL1B loci with primary open angle glaucoma, ***BMC Medical Genetics***, 11:99, June 19, 2010. PMID: 20565898
2. Gupta A, Chattopadhyay I, Mukherjee S, Sengupta M, Das SK and **Ray K.** A novel COMMD1 mutation Thr174Met associated with elevated urinary copper and signs of enhanced apoptotic cell death in a Wilson Disease patient, ***Behavioral and Brain Functions***, 6:33, June 15 2010 [Epub ahead of print] PMID: 20550661
3. Sengupta M, Chakraborty Amrita, Indian Genome Variation Consortium, **Ray K**, Analysis of single nucleotide polymorphisms of *PRNP* gene in twenty four ethnic groups of India, ***Journal of Genetics***, 89:247-51, 2010. PMID: 20861579
4. Sengupta M, Mondal M, Jaiswal P, Sinha S, Chaki M, Samanta S, **Ray K**, Comprehensive analysis of the molecular basis of OCA in Indian patients lacking mutation in Tyrosinase gene, ***British Journal of Dermatology*****,** 163(3):487-94, 2010, PMID: 20426782
5. Biswas A, Sadhukhan T, Majumder S, Misra AK, Das SK, Indian Genome Variation Consortium, **Ray K**, Ray J. Evaluation of *PINK1* variants in Indian Parkinson's disease patients, ***Parkinsonism & Related Disorders***, 16:167-71, Mar 2010, PMID: 19889566

MUTATION REPORT

1. Ray K, Sengupta M. Gene symbol: OCA2. Disease: Albinism, Oculocutaneous II: ***Human Genetics*** 2010 Apr;127(4):487; PMID: 21491616
2. Ray K, Sengupta M. Gene symbol: OCA2. Disease: Albinism, Oculocutaneous II: ***Human Genetics*** 2010 Apr;127(4):487-488; PMID: 21491617

2009

1. Das G, Misra AK, Das SK, **Ray K**, Ray J. Microtubule-associated protein tau (*MAPT*) influences the risk of Parkinson's disease among Indians, ***Neuroscience Letters***, 460:16-20, 2009.

2. **Ray, K**, Mookherjee, S, Molecular Complexity of Primary Open Angle Glaucoma: Current Concepts, ***Journal of Genetics***, 2009.

2008

1. Bhattacharjee A, Banerjee D, Mookherjee S, Acharya M, Banerjee A, Ray A, Sen A, Indian Genome Variation Consortium, **Ray K.** Leu432Val Polymorphism in CYP1B1 as a Susceptible Factor towards Predisposition to Primary Open Angle Glaucoma, ***Molecular Vision***, 14: 841-850, 2008
2. Sengupta M, Ray A, Chaki M, Maulik M, **Ray K.** SNPs in genes with copy number variation: A question of specificity, ***Journal of Genetics***, 87: 95-97, 2008
3. Indian Genome Variation Consortium. Genetic landscape of the people of India: a canvas for disease gene exploration, ***Journal of Genetics***, 87:3-20, 2008. [***K Ray's role in the study published:*** Core manuscript writing group; Project planning; Implementation; Sample management; SNP discovery, validation and analysis; Data QC]. PDF furnished in CD
4. De Chaudhuri S, Ghosh P, Sarma N, Majumdar P, Sau TJ, Basu S, Roychoudhury S, **Ray K,** Giri AK. Genetic variants associated with arsenic susceptibility: study of purine nucleoside phosphorylase, arsenic (+3) methyltransferase, and glutathione s-transferase omega genes, ***Environmental Health Perspective***, 116:501-505, 2008.
5. Mukherjee S, Saha A, Biswas P, Mandal C, **Ray K.** Structural analysis of factor IX protein variants to predict functional aberration causing hemophilia B, ***HAEMOPHILIA***, 14, 1076-1081, 2008.
6. Acharya M, Mukhopadhyay A, Bhattacharjee A, Thakur SK, Bandyopadhyay A, **Ray K**. Complex genetics of glaucoma: Defects in CYP1B1, and not MYOC, cause pathogenesis in an early-onset POAG patient with double variants at both loci, ***Journal of Genetics*** (in press) 2008.
7. Ghosh P, Banerjee M, Giri AK, **Ray K**. Toxicogenomics of arsenic: Classical ideas and recent advances, ***Mutation Research Reviews***, 659:293-301, 2008
8. Roy MK, **Ray K**, Das SK: Wilson's Disease, In ***Movement Disorders: A Clinical and Therapeutic Approach*** (edited by Dr. Shyamal K. Das and published by Jaypee Brothers Medical Publishers Pvt Ltd), 261-278, 2008.

MUTATION REPORT

1. **Ray K**, Gupta A. Gene symbol: ATP7B. Disease: Wilson disease: ***Human Genetics*** 2008 Oct;124(3):297; PMID: 18846616

2007

1. Acharya M, Mookherjee S, Bhattacharjee A, Thakur SKD, Bandyopadhyay AK, Chakrabarti S and **Ray K.** Evaluation of the Opticin gene in primary open angle glaucoma: functional significance of a silent change, ***BMC Molecular Biology***, 8: 21, 2007.
2. Bhattacharjee A, Acharya M, Mukhopadhyay A, Mookherjee S, Banerjee D, Bandyopadhyay AK, Thakur SKD, Sen A, **Ray K.** *Myocilin* mutations and SNPs in Indian POAG patients, ***Archives of Ophthalmology***, 125: 823-829, 2007.
3. **Ray K**, Chaki M, Sengupta M. Tyrosinase and ocular diseases: some novel thoughts on the molecular basis of oculocutaneous albinism type 1, ***Progress in Retinal and Eye Research***, 26, 323-358, 2007.
4. Sengupta M, Chaki M, Arti N, **Ray K.** *SLC45A2* variations in Indian oculocutaneous albinism patients, ***Molecular Vision***, 13:1406-1411, 2007.
5. Gupta A, Maulik M, Nasipuri P, Chattopadhyay I, Das SK, Gangopadhyay PK, The Indian Genome Variation Consortium, **Ray K.** Molecular diagnosis of Wilson disease using prevalent mutations and informative SNP markers. ***Clinical Chemistry***, 53:1601–1608, 2007.
6. Gupta A, Chattopadhyay I, Dey S, Nasipuri P, Das SK, Gangopadhyay PK, **Ray K.** Molecular pathogenesis of Wilson disease among Indians: A perspective on mutation spectrum in ATP7B gene, prevalent defects, clinical heterogeneity and implication towards diagnosis ***Cellular & Molecular Neurobiology***, 27, 1023-33, 2007.
7. Saha A, Mukherjee S, Maulik M, Chandak GR, The Indian Genome Variation Consortium, **Ray K.** Evaluation of genetic markers linked to Hemophilia A locus: An Indian Experience, ***Haematologica***, 92, 1725-1726, 2007.

8. Biswas A, Maulik M, Das SK, The Indian Genome Variation Consortium, **Ray K**, Ray J. Parkin Polymorphisms: Risk for Parkinson's disease in Indian Population. ***Clinical Genetics***, 72, 484-486, 2007.
9. Ghosh P, Banerjee M, Chaudhuri SD, Chowdhury R, Das JK, Mukherjee A, Sarkar AK, Mondal LK, Baidya K, Sau TJ, Banerjee A, Basu A, Chaudhuri K, **Ray K**, Giri A: Comparison of health effects between individuals with and without skin lesions in the population exposed to arsenic through drinking water in West Bengal, India. ***Journal of Exposure Science and Environmental Epidemiology***, 17 (3): 215-223, 2007.
10. Gupta A, Das SK, **Ray K.** Molecular diagnostic strategies to identify presymptomatic and carrier individuals in Wilson disease families. ***Perspective in Cytology and Genetics***, 13:63-76, 2007.

MUTATION REPORT

1. **Ray K**, Bhattacharjee A. Gene symbol: MYOC: ***Human Genetics*** 2007 Apr;121(2):290; PMID: 17598231
2. **Ray K**, Mukhopadhyay A, Acharya M, Gene symbol: MYOC: ***Human Genetics*** 2007 Apr;121(2):290-1; PMID: 17598205
3. **Ray K**, Acharya M, Mookherjee S. Gene symbol: CYP1B1: ***Human Genetics*** 2007 Apr;121(2):292; PMID: 17598234
4. **Ray K**, Acharya M, Mookherjee S. Gene symbol: CYP1B1: ***Human Genetics*** 2007 Apr;121(2):291; PMID: 17598233
5. **Ray K**, Acharya M, Mookherjee S. Gene symbol: CYP1B1: ***Human Genetics*** 2007 Apr;121(2):291; PMID: 17598232
6. **Ray K**, Acharya M. Gene symbol: CYP1B1: ***Human Genetics*** 2007 Apr;121(2):291; PMID: 17598206
7. **Ray K**, Chaki M, Sengupta M. Gene symbol: SLC45A2. ***Human Genetics*** 2007 Apr;121(2):295; PMID: 17598242
8. **Ray K**, Chaki M, Sengupta M. Gene symbol: SLC45A2. ***Human Genetics*** 2007 Apr;121(2):295; PMID: 17598241
9. **Ray K**, Chaki M, Sengupta M. Gene symbol: SLC45A2. ***Human Genetics*** 2007 Apr;121(2):294; PMID: 17598240
10. **Ray K**, Chaki M, Sengupta M. Gene symbol: SLC45A2. ***Human Genetics*** 2007 Apr;121(2):294; PMID: 17598214 (
11. **Ray K**, Chaki M, Sengupta M. Novel human pathological mutations. Gene symbol: TYR. Disease: albinism, oculocutaneous 1. ***Human Genetics*** 2007 Dec;122(5):555; PMID: 18383608
12. **Ray K**, Chaki M, Sengupta M. Novel human pathological mutations. Gene symbol: TYR. Disease: tyrosinase deficiency. ***Human Genetics*** 2007 Dec;122(5):555; PMID: 18383609
13. **Ray K**, Chaki M, Sengupta M. Novel human pathological mutations. Gene symbol: TYR. Disease: tyrosinase deficiency. ***Human Genetics*** 2007 Dec;122(5):556; PMID: 18383610
14. **Ray K**, Chaki M, Sengupta M. Novel human pathological mutations. Gene symbol: TYR. Disease: tyrosinase deficiency. ***Human Genetics*** 2007 Dec;122(5):556; PMID: 18383611

2006

1. Acharya M, Mookherjee, S, Bhattacharjee A, Bandyopadhyay AK, Thakur SKD, Bhaduri G, Sen A, **Ray K.** Primary role of *CYP1B1* in juvenile onset primary open angle glaucoma. ***Molecular Vision***, 12, 399-404, 2006.
2. Bhattacharjee A, Acharya M, Mookherjee S, Banerjee S, Mukhopadhyay A, Banerjee AK, Thakur SKD, Sen A, **Ray K.** Role of myocilin in glaucoma: Molecular defects and possible functional aberrations leading to pathogenesis. ***Asian Journal of Experimental Sciences***, 20 (suppl), 97-112, 2006.
3. Chaki M, Sengupta M, Mukhopadhyay A, Subba Rao I, Majumder, PP, Das M, Samanta S, **Ray K.** OCA1 in different ethnic groups of India is primarily due to founder mutations in the Tyrosinase gene, ***Annals of Human Genetics***, 70: 623-630, 2006.

4. Gupta A, Nasipuri P, Das SK, **Ray K**: Simple and effective strategies for Detection of Allele Dropouts in PCR-Based Diagnosis of Wilson disease. ***Clinical Chemistry***, 52: 1611-1612, 2006.
5. Aikath D, Gupta A, Hashmi MA, Gangopadhyay PK, Das SK, **Ray K**. Subcortical white matter abnormalities related to drug resistance in Wilson disease. ***Neurology***, 67: 878-880, 2006.
6. Das SK and **Ray K**. Wilson's Disease: An update, ***Nature Clinical Practice Neurology***, 2: 482-493, 2006.
7. Naiya T, Biswas A, Neogi R, Datta S, Misra AK, Das SK, **Ray K** and Ray J. Clinical characterization and evaluation of DYT1 gene in Indian primary dystonia patients, ***Acta Neurologica Scandinavica***, 114: 210-215, 2006.
8. Biswas A, Gupta A, Naiya T, Das G, Neogi R, Datta S, Mukherjee S, Das SK, **Ray, K** and Ray J. Molecular Pathogenesis of Parkinson's Disease: Identification of Causal Mutations in the Parkin Gene in Indian Patients, ***Parkinsonism & Related Disorders***, 12, 420-426, 2006.
9. Saha A, Mukherjee S, **Ray K.** Improved assay for genotyping Hemophilia A carriers with intron 22 dinucleotide repeat marker, ***HAEMOPHILIA***, 12, 200-201, 2006.
10. Mukherjee S, Saha A, P. Kumar S, Chandak, GR, Majumadar PP, **Ray K**: Remarkable variation in the informativeness of RFLP markers linked to hemophilia B locus in Indian population groups: Implication in the strategy for carrier detection, ***Disease Markers***, 22: 327-334, 2006.
11. Ghosh P, Basu A, Mahata J, Basu S, Sengupta M, Das JK, Mukherjee A, Sarkar AK, Mondal LK, **Ray K**, Giri AK. Cytogenetic Damage and Genetic Variants in the Individuals Susceptible to Arsenic Induced Cancer through Drinking Water. ***International Journal of Cancer***, 118, 2470-2478, 2006.
12. **Ray K**, and Gupta A. Single Nucleotide Polymorphism: A Novel Genomic Tool for the Pharmaceutical Industries. In ***Biodiversity and Biotechnology*** (edited by Dr. S. Ray and Dr. A. K. Ray and published by the New Central Book Agency Pvt Ltd, Kolkata, India), 272-285, 2006.

MUTATION REPORT

1. **Ray K**, Chaki M, Sengupta M. Gene symbol: TYR. Disease: albinism, oculocutaneous 1. ***Human Genetics*** 2006 Jul;119(6):675; PMID: 17128464

2005

1. Mukhopadhyay A, Komatireddy S, Acharya M, Bhattacharjee A, Mandal AK, Thakur SKD, Chandrasekhar G., Banerjee A, Thomas R, Chakrabarti S, **Ray K**. Evaluation of optineurin as a candidate gene in Indian patients with primary open angle glaucoma, ***Molecular Vision***, 11, 792-797, 2005.
2. Chakrabarti S, Kaur K, Komatireddy S, Acharya M, Devi KR, Mukhopadhyay A, Mandal, AK, Hasnain SE, Chandrasekhar G., Thomas R, **Ray, K**. Gln48His is the prevalent myocilin mutation in primary open angle and primary congenital glaucoma phenotypes in India, ***Molecular Vision***, 11, 111-113, 2005.
3. Kaur K, Reddy ABM, Mukhopadhyay A, Mandal AK, Hasnain S, **Ray K**, Thomas R, Balasubramanian, Chakrabarti S. Myocilin gene implicated in primary congenital glaucoma, ***Clinical Genetics***, 67, 335-340, 2005.
4. Chaki M, Mukhopadhyay A, Chatterjee S, Das M, Samanta S, **Ray K.** Higher prevalence of OCA1 in an ethnic group of eastern India is due to a founder mutation in the Tyrosinase gene, ***Molecular Vision***, 11, 531-534, 2005.
5. Chaki M, Mukhopadhyay A, **Ray K**. Determination of variants in the 3'-region of Tyrosinase gene requires locus specific amplification. ***Human Mutation***, 26, 53-58, 2005.
6. Gupta A, Aikath D, Neogi R, Datta S, Basu K, Maity B, Trivedi R, Ray J, Das SK, Gangopadhyay PK, **Ray K.** Molecular pathogenesis of Wilson Disease: Haplotype analysis, detection of prevalent mutations and genotype-phenotype correlation in Indian patients, ***Human Genetics***, 118, 49-57, 2005.
7. The Indian Genome Variation Consortium. The Indian Genome Variation database (IGVdb): A project overview, ***Human Genetics***, 118,1-11, 2005 (*K Ray is one of the nodal scientist of the consortium*).

8. Sarkar M, Das S, Bandyopadhyay A, **Ray K**, Chaudhuri K. Upregulation of human mitochondrial NADH dehydrogenase subunit 5 in intestinal epithelial cells is modulated by *Vibrio cholerae* pathogenesis, ***FEBS Letters***, 579, 3449-3460, 2005.

MUTATION REPORT

1. **Ray K**, Chaki M, Mukhopadhyay A. Gene symbol: TYR. Disease: albinism, oculocutaneous 1. ***Human Genetics*** 2005 Jul;117(2-3):299; PMID: 16156027
2. **Ray K**, Chaki M, Mukhopadhyay A. Gene symbol: TYR. Disease: albinism, oculocutaneous 1. ***Human Genetics*** 2005 May;116(6):545; PMID: 15991334
3. **Ray K**, Chaki M, Mukhopadhyay A. Gene symbol: TYR. Disease: albinism, oculocutaneous 1. ***Human Genetics*** 2005 May;116(6):544; PMID: 15991333
4. **Ray K**, Chaki M, Mukhopadhyay A. Gene symbol: TYR. Disease: albinism, oculocutaneous 1. ***Human Genetics*** 2005 May;116(6):544; PMID: 15991332
5. **Ray K**, Chaki M, Mukhopadhyay A. Gene symbol: TYR. Disease: albinism, oculocutaneous 1. ***Human Genetics*** 2005 May;116(6):533; PMID: 15838715
6. **Ray K**, Gupta A. Gene symbol: ATP7B. Disease: Wilson's disease: ***Human Genetics*** 2005 Dec;118(3-4):541; PMID: 16521267
7. **Ray K**, Gupta A. Gene symbol: ATP7B. Disease: Wilson's disease: ***Human Genetics*** 2005 Jul;117(2-3):299; PMID: 16156028
8. **Ray K**, Gupta A. Gene symbol: ATP7B. Disease: Wilson's disease: ***Human Genetics*** 2005 Jul;117(2-3):296; PMID: 16156019
9. **Ray K**, Gupta A. Gene symbol: ATP7B. Disease: Wilson's disease: ***Human Genetics*** 2005 Jul;117(2-3):295; PMID: 16156016
10. **Ray K**, Gupta A. Gene symbol: ATP7B. Disease: Wilson's disease: ***Human Genetics*** 2005 Jul;117(2-3):294; PMID: 16156015
11. **Ray K**, Gupta A. Gene symbol: ATP7B. Disease: Wilson's disease: ***Human Genetics*** 2005 Jul;117(2-3):294; PMID: 16156014

2004

1. Mukhopadhyay A, Talukdar S, Bhattacharjee A, and **Ray K**: Bioinformatic approaches for identification and characterization of olfactomedin-related genes with potential role in pathogenesis of ocular disorders, ***Molecular Vision***, 10, 304-314, 2004.
2. **Ray K**, Thakur SKD, Banerjee AK, Mukhopadhyay A, Acharya M, Bhattacharjee A, Sen A, Bhaduri G. Genetics and Bioinformatics of Primary Open Angle Glaucoma: An Indian Perspective, ***Journal of the Indian Medical Association***, 102, 708-718, 2004.
3. Mukherjee S, Mukhopadhyay A, Banerjee D, Chandak GR, and **Ray K**: Molecular Pathology of Haemophilia B: Identification of five novel mutations including a LINE 1 insertion in Indian patients, ***HAEMOPHILIA***, 10, 259-263, 2004.
4. Basu A, Ghosh P, Das JK, Banerjee A, **Ray K** and Giri AK: Micronuclei as biomarkers of carcinogen exposure in populations exposed to arsenic through drinking water in West Bengal, India: a comparative study in three cell types, ***Cancer Epidemiology Biomarkers & Prevention***, 13, 820-827, 2004.
5. Mahata J, Chaki M, Ghosh P, Das JK, Baidya KP, **Ray K**, Natarajan AT, Giri AK: Chromosomal aberrations in arsenic exposed human population: a review with special reference to a comprehensive study in West Bengal, India, ***Cytogenetics and Genome Research***, 104, 359-364, 2004.
6. Mahata J, Ghosh P, Sarkar JN, **Ray K**, Natarajan AT, Giri AK: Effect of sodium arsenite on peripheral lymphocytes in vitro: individual susceptibility among a population exposed to arsenic through the drinking water, ***Mutagenesis*****,** 19, 223-229, 2004.

2003

1. **Ray K**, Mukhopadhyay A and Acharya M: Recent advances in molecular genetics of glaucoma, ***Molecular and Cellular Biochemistry***, 253, 223-231, 2003.
2. Mukhopadhyay A, Acharya M, Ray J, Khan M, Sarkar K, Banerjee AR and **Ray K**: Myocilin mutation 1109 C>T (Pro 370 Leu) is the most common gene defect causing early onset primary open angle glaucoma, ***Indian Journal of Ophthalmology***, 51, 279-281, 2003.

3. Gupta A, Neogi R, Mukherjea M, Mukhopadhyay A, Roychaudhury S, Senapati A, Gangopadhyay PK, and **Ray K**: DNA linkage based diagnosis of Wilson disease in asymptomatic siblings, ***Indian Journal of Medical Research***, 118, 208-214, 2003.
4. Mukherjee S, Mukhopadhyay A, Chaudhuri K and **Ray K**: Analysis of haemophilia B database and strategies for identification of common point mutations in the factor IX gene, ***HAEMOPHILIA***, 9, 187-192, 2003.
5. Brooks MB, Gu W-K, Barnas JL, Ray J and **Ray K**: A Line 1 Insertion in the Factor IX Gene Segregates with Mild Hemophilia B in Dogs, ***Mammalian Genome***, 14, 788-795, 2003.
6. Mahata J, Basu A, Ghosal S, Sarkar JN, Roy AK, Poddar G, Nandy AK, Banerjee A, **Ray K**, Natarajan AT, Nilsson R and Giri AK: Chromosomal aberrations and sister chromatid exchanges in individuals exposed to arsenic through drinking water in West Bengal, India, ***Mutation Research*****,** 534, 133-143, 2003.
7. Mitra S, Chatterjee S, Panda CK, Chadhuri K, **Ray K**, Bhattacharyya NP, Sengupta A and Roychoudhury S: Haplotype structure of TP53 locus in Indian population and possible association with head and neck cancer, ***Annals of Human Genetics***, 67, 26-34, 2003.

2002

1. Mukhopadhyay A, Gupta A, Mukherjee S, Chaudhuri K and **Ray K**: Did myocilin evolve from two different primordial proteins? ***Molecular Vision***, 8, 271-219, 2002.
2. Mukhopadhyay A., Acharya M, Mukherjee S., Ray J, Choudhury S, Khan M, and **Ray K**: Mutations in MYOC gene of Indian primary open angle glaucoma patients, ***Molecular Vision***, 8, 442-448, 2002.
3. Acharya M, Mitra S, Mukhopadhyay A, Khan M, Roychoudhury S and **Ray K**: Distribution of p53 codon 72 polymorphism in Indian primary open angle glaucoma patients, ***Molecular Vision***, 8, 367-371, 2002.
4. Ray J and **Ray K**: Gene Therapy in Medicine, ***Indian Journal of Ophthalmology***, 50, 261-263, 2002.
5. Basu A, Mahata J, Roy AK, Sarkar JN, Poddar G, Nandi A, Sarkar PK, Dutta, PK, Banerjee A, Das M, **Ray K**, Roychoudhury S, Natarajan AT, Nilsson R and Giri AK: Enhanced frequency of micronuclei in individuals exposed to arsenic through drinking water in West Bengal, India. ***Mutation Research***, 516, 29-40, 2002.

2001

1. **Ray K**, Roychoudhury S, Senapati A, Basu N and Gangopadhyay PK: Recent advances in Wilson's disease, ***Advances in Clinical Neurosciences*** 11, 247-258, 2001.
2. Brooks MB, Erb HN, Foureman PA and **Ray K** von Willebrand disease phenotype and von Willebrand factor marker genotype in Doberman Pinschers. ***American Journal of Veterinary Research***, 62, 364-369, 2001.
3. Chakrabarti S, Dasgupta S, Roy S, Bhar A, Sengupta A, Roy A, **Ray K**, Bhattacharyya NP, Roy B, Panda CK and Roychoudhury S Microsatellite instability in squamous cell carcinoma of head and neck from the Indian patient population. ***International Journal of Cancer***, 92, 555-561, 2001

2000

1. Zeiss C, **Ray K,** Acland G, Aguirre G: Mapping of X-linked progressive retinal atrophy (XLPRA), the canine homolog of retinitis pigmentosa 3 (RP3), and characterization of RPGR splice variants, ***Human Molecular Genetics***, 9, 531-537, 2000.
2. Zhang Q, **Ray K**, Acland GM, Czarnecki JM and Aguirre GD: Molecular cloning, characterization and expression of a novel retinal clusterin-like protein cDNA, ***GENE***, 243, 151-160, 2000.

1999

1. Zeiss CJ, Acland GM, Aguirre GD and **Ray K**: TIMP-1 expression is increased in X-linked progressive retinal atrophy despite its exclusion as a candidate gene, ***GENE***, 225, 67-75, 1999.

2. Langston AA, Mellersh C, Wiegand NA, Acland GM, **Ray K**, Aguirre GD and Ostrander EA: Towards a framework linkage map of the canine genome, ***Journal of Heredity***, 90, 7-14,1999.
3. Aguirre GD, Baldwin VJ, Weeks KM, Acland GM, **Ray K**: Frequency of the codon 807 mutation in the cGMP phosphodiesterase -subunit gene in Irish setters and other dog breeds with hereditary retinal degeneration, ***Journal of Heredity***, 90, 143-147,1999.
4. Zhang Q, Baldwin VJ, Acland GM, Parshall CJ, Haskell J, Aguirre GD and **Ray K**: Photoreceptor Dysplasia (*pd*) in Miniature Schnauzer dogs: Evaluation of Candidate Genes by Molecular Genetic Analysis, ***Journal of Heredity***, 90, 57-61,1999.
5. Gu W-K, Post CM, Aguirre GD and **Ray K**: Individual DNA bands obtained by RAPD analysis of canine genomic DNA often contain multiple DNA sequences, ***Journal of Heredity***, 90, 96-98,1999.
6. **Ray K**, Wang W, Czarnecki J, Zhang Q, Acland GM and Aguirre GD: Strategies for identification of mutations causing hereditary retinal diseases in dogs: evaluation of opsin as a candidate gene, ***Journal of Heredity***, 90, 133-137,1999.
7. Neff MW, Broman KW, Mellersh CS, **Ray K**, Acland GM, Aguirre GD, Ziegle ZS, Ostrander EA and Rine J: A second-generation genetic linkage map of the domestic dog, *Canis familiaris***, *Genetics***, 151, 803-820, 1999.
8. Gu W-K, **Ray K**, Pearce-Kelling S, Baldwin VJ, Langston AA, Ray J, Ostrander E, Acland GM and Aguirre GD: Evaluation of the APOH Gene as a Positional Candidate for *prcd* in Dogs, ***Investigative ophthalmology and visual Sciences***, 40, 1229-1237, 1999.
9. Acland GM, **Ray K**, Mellersh CS, Langston AA, Rine J, Ostrander EA and Aguirre GD: A novel retinal degeneration locus identified by linkage and comparative mapping of canine early retinal degeneration, ***Genomics***, 59, 134-142, 1999.
10. Wang W, Zhang Q, Acland GM, Mellersh C, Ostrander EA, **Ray K** and Aguirre GD: Molecular characterization and mapping of canine cGMP-phosphodiesterase delta subunit (*PDE6D*), ***GENE***, 236, 325-332, 1999.
11. Wang W, Acland GM, **Ray K** and Aguirre GD: Evaluation of cGMP-Phosphodiesterase (PDE) Subunits for Causal Association with Rod-Cone Dysplasia 2 (*rcd2*), a Canine Model of Abnormal Retinal cGMP Metabolism, ***Experimental Eye Research***, 69, 445-453, 1999.
12. Gu W-K, Brooks M, Catalfamo J, Ray J and **Ray K**: Two distinct mutations cause severe haemophilia B in two unrelated canine pedigrees, ***Thrombosis and Haemostasis***, 82, 1270-1275, 1999.

1998

1. Acland GM, **Ray K**, Mellersh CS, Gu W-K, Langston AA, Rine J, Ostrander, EA and Aguirre GD: Linkage analysis and comparative mapping of canine progressive rod-cone degeneration (*prcd*) establishes locus homology with retinitis pigmentosa (RP17) in humans, ***Proceedings of National Academy of Sciences (USA)***, 95, 3048-3053, 1998.
2. Gu W-K, Aguirre GD and **Ray K**: Detection of single nucleotide polymorphism, ***BioTechniques***, 24, 836-837, 1998.
3. Trepanier LA, Cribb AE, Spielberg SP and **Ray K**: Deficiency of cytosolic arylamine N-acetylation in the domestic cat and wild felids due to the presence of only a single NAT1-like gene, ***Pharmacogenetics***, 8, 169-179, 1998.
4. Zeiss CJ, Trepanier LA, Aguirre GD and **Ray K**: A highly conserved microsatellite in the dystrophin gene of diverse mammalian species, ***Animal Genetics***, 29, 224-227, 1998.
5. Zhang Q, Acland GM, Parshall CJ, Haskell J., **Ray K** and Aguirre GD: Characterization of canine photoreceptor phosducin cDNA and identification of a sequence variant in dogs with photoreceptor dysplasia, ***GENE***, 215, 231-239, 1998.
6. Gu W-K, Acland GM, Langston AA, Ostrander EA, Aguirre GD and **Ray K**: Identification of a RAPD marker linked to progressive rod-cone degeneration in dogs, ***Mammalian Genome***, 9, 740-744, 1998.
7. Ray J, Haskins ME and **Ray K**: Molecular diagnostic tests for ascertainment of genotype at the canine mucopolysaccharidosis type VII locus, ***American Journal of Veterinary Research***, 59, 1092-1095, 1998.

8. Aguirre GD, Baldwin V, Pearce-Kelling S, Narfström K, **Ray K** and Acland GM: Congenital stationary night blindness in the dog: common mutation in the RPE65 gene indicates founder effect, ***Molecular Vision***, 4, 23, 1998.
9. Song Y-H, **Ray K**, Liebhaber SA and Cooke NE: Vitamin D binding protein gene transcription is regulated by the relative abundance of HNF1 and HNF1, ***Journal of Biological Chemistry***, 273, 28408-28418, 1998.
10. Zeiss CJ, Aguirre GD and **Ray K**: A highly polymorphic RFLP marker in the canine retinitis pigmentosa GTPase regulator (RPGR) gene, ***Animal Genetics***, 29, 409, 1998.
11. Ray J., Brooks MB, Suh Y and **Ray K**: A PCR-RFLP marker in canine von Willebrand factor gene (*vWF*), ***Animal Genetics***, 29, 406-407, 1998.
12. Aguirre GD, **Ray K** and Acland, GM: Candidate gene studies in canine retinal atrophy, ***Digital Journal of Ophthalmology***, Volume 4 (No. 3), 1998. Web Site: (http://www.djo.harvard.edu/site.php?url=/physicians/oa/381)

1997

1. **Ray K**, Baldwin VJ, Zeiss C, Acland GM and Aguirre GD: Canine rod transducin -1: cloning of the cDNA and evaluation of the gene as a candidate for progressive retinal atrophy. ***Current Eye Research***, 16, 71-77, 1997.
2. Trepanier LA, **Ray K**, Winand NJ, Spielberg SP and Cribb AE: Cytosolic Arylamine *N*-acetyltransferase (NAT) deficiency in the dog and other canids is due to an absence of *NAT* genes. ***Biochemical Pharmacology***, 54, 73-80, 1997.
3. Zhang Q, Pearce-Kelling S, Acland GM, Aguirre GD and **Ray K**: Canine rod photoreceptor cGMP-gated channel protein -subunit: studies on the expression of the gene and characterization of the cDNA. ***Experimental Eye Research***, 65, 301-309, 1997
4. Akhmedov NB, Piriev NI, **Ray K**, Acland GM, Aguirre GD and Farber DB: Structure and analysis of the transducin -3 subunit gene, a candidate for inherited cone degeneration (*cd*) in the dog. ***GENE***, 194, 47-56, 1997.
5. Wang W, Aguirre GD and **Ray K**: PCR/RFLP marker in the canine transducin- gene (*GNGT1*). ***Animal Genetics***, 28, 319-320, 1997
6. Gu W-K, Acland GM, Aguirre GD and **Ray, K**: Evaluation of RAPD analysis for identification of polymorphisms in canine genomic DNA, ***Animal Biotechnology***, 8, 207-219, 1997.
7. Mellersh CS, Langston AA, Acland GM, Fleming MA, **Ray K**, Weigand NA, Francisco LV, Gibbs M, Aguirre GD and Ostrander, EA: A linkage map of the canine Genome, ***Genomics***, 46, 326-336, 1997.
8. Langston AA, Mellersh CS, Neal CL, **Ray K**, Acland GM, Gibbs M, Aguirre GD, Fournier REK and Ostrander, EA: Construction of a panel of canine-rodent hybrid cell lines for use in partitioning of the canine genome, ***Genomics***, 46, 317-325, 1997.
9. Gu W-K and **Ray, K**: A polymorphic $(TTTA)_n$ tandem repeat in an intron of the canine factor IX gene, ***Animal Genetics***, 28, 370, 1997.
10. Brooks MB, Gu W-K and **Ray K**: Complete deletion of the factor IX gene and inhibition of factor IX activity in a Labrador Retriever affected with haemophilia B, ***Journal of American Veterinary Medical Association***, 211, 1418-1421, 1997.

1996

1. **Ray K**, Acland GM and Aguirre, GD: Nonallelism of *erd* and *prcd* and exclusion of the canine RDS/peripherin gene as a candidate for both retinal degeneration loci; ***Investigative ophthalmology and visual Sciences***, 37, 783-794, 1996
2. **Ray K**, Lara Tejero MD, Baldwin VJ and Aguirre GD: An improved diagnostic test for rod cone dysplasia 1 (*rcd1*) using allele-specific polymerase chain reaction. ***Current Eye Research***, *15*, 583-587, 1996
3. **Ray K**, Zeiss C, Acland GM, Trepanier LA and Aguirre GD: A highly polymorphic RFLP marker in the canine transducin α-1 subunit gene. ***Animal Genetics***, 27, 372-373, 1996
4. **Ray K**, Trepanier LA, Acland GM, and Aguirre GD: PCR/RFLP marker in the canine opsin gene. ***Animal Genetics***, 27, 293-294, 1996

5. Wang W, Acland GM and Aguirre GD, **Ray K**: Cloning and characterization of the cDNA encoding the α-subunit of cGMP-phosphodiesterase in canine retinal rod photoreceptor cells. ***Molecular Vision***, 2, 96002, 1996
6. Wang W, Acland GM and Aguirre GD, **Ray K**: Cloning and characterization of the cDNA and gene encoding the -subunit of cGMP-phosphodiesterase in canine retinal rod photoreceptor cells. ***GENE***, 181, 1-5, 1996

1995

1. **Ray K**, Baldwin VJ, Acland GM and Aguirre GD: Molecular diagnostic test for ascertainment of genotype at the rod cone dysplasia 1 (*rcd1*) locus in Irish setters. ***Current Eye Research***, 14, 243-247, 1995

1994

1. **Ray K**, Baldwin VJ, Acland GM, Blanton SH and Aguirre GD: Co-segregation of codon 807 mutation of the rod cGMP phosphodiesterase -subunit gene (PDEB) and *rcd1*. ***Investigative ophthalmology and visual Sciences***, 35, 4291-4299, 1994

1992

1. Haddad JG, Hu YZ, Kowalski MA, Laramore C, **Ray K**, Robzyk P and Cooke NE: Identification of the sterol and actin binding domains of plasma vitamin D binding protein (Gc-globulin). ***Biochemistry***, 31, 7174-7181, 1992
2. Wang X, **Ray K**, Szpirer J, Levan G, Liebhaber SA and Cooke, NE: Analysis of the Human Cysteine-Rich Protein Gene (CSRP), Assignment to chromosome 1q24-1q32, and identification of an associated *Msp1* polymorphism. ***Genomics***, 14, 391-397, 1992

1991

1. **Ray K**, Wang X, Zhao M and Cooke, NE: The rat vitamin D binding protein (Gc-Globulin) gene: Structural analysis, functional and evolutionary correlations. ***Journal of Biological Chemistry***, 266, 6221-6229, 1991
2. Cooke NE, McLeod JF, Wang X and **Ray, K**: Vitamin D binding protein: Genomic structure, functional domains, and mRNA expression in tissues. ***Journal of Steroid Biochemistry and Molecular Biology***, 40, 787-793, 1991

1989

1. Weiss MJ, **Ray K**, Fallon MD, Whyte MP, Fedde KN, Lafferty MA, Mulivor RA and Harris H: Analysis of liver/bone/kidney alkaline phosphatase mRNA, DNA, and enzymatic activity in cultured skin fibroblasts from 14 unrelated patients with severe hypophosphatasia. ***American Journal of Human Genetics***, 44, 686-694, 1989
2. Weiss MJ, Cole DEC, **Ray K**, Whyte MP, Lafferty MA, Mulivor RA and Harris H: First identification of a gene defect for hypophosphatasia: evidence that alkaline phosphatase acts in skeletal mineralization. ***Connective Tissue Research***, 21, 99-106, 1989

1988

1. **Ray K**, Weiss MJ, Dracopoli NC and Harris H: Probe 8B/E5' detects a second RFLP at the human liver/bone/kidney alkaline phosphatase (ALPL) locus. ***Nucleic Acids Research***, 16, 2361, 1988
2. **Ray K** and Cooke NE: A high frequency MspI RFLP at the human Vitamin D binding protein locus. ***Nucleic Acids Research***, 16, 7211, 1988
3. Weiss MJ, **Ray K**, Henthorn PS, Lamb B, Kadesh T and Harris H: Structure of human liver/bone/kidney alkaline phosphatase gene. ***Journal of Biological Chemistry***, 263, 12002-12010, 1988
4. Weiss MJ, Cole DEC, **Ray K**, Whyte MP, Lafferty MA, Mulivor RA and Harris H: A missense mutation in the human liver/bone/kidney alkaline phosphatase gene causing a lethal form of hypophosphatasia. ***Proceedings of National Academy of Sciences, (USA)***, 85, 7666-7669, 1988
5. Dahlmann B, Kuehn L, Sugita H, Tanaka K, Rivett J, Hough RF, Rechsteimer M, Mykles DL, Waxman L, Fagan JM, Ishii S, Sasaki M, Kloetzel P, **Ray K**, Harris H, Behal FJ, Demartino

GN and McGuire MJ: The multicatalytic protinase: a high-M_r endopeptidase. ***Biochemical Journal***, 255, 750-751, 1988

6. Maity SN, **Ray K**, Banerjee A, Mukhopadhyay K, Roy Chowdhury S, Ghosh Chaudhuri G, Biswas BB and Bhattacharyya B: Role of B-ring of colchicine in its binding to tubulin. ***Indian Journal of Biochemistry and Biophysics***, 25, 585-589, 1988

1980-1987

1. **Ray K** and Harris H: Lens neutral endopeptidase occurs in other bovine and human tissues. ***Biochemical Journal***, 248, 643-648, 1987
2. **Ray K** and Harris H: Comparative studies on lens neutral endopeptidase and pituitary neutral proteinase: two closely similar enzymes. ***FEBS Letters***, 194, 91-95, 1986
3. **Ray K**, and Harris H: Purification of neutral lens endopeptidase: Close similarity to a neutral proteinase in pituitary. ***Proceedings of National Academy of Sciences, (USA)***, 82, 7545-7549, 1985.
4. **Ray K**, Bhattacharyya B and Biswas BB: Anion-induced increases in the affinity of colcemid binding to tubulin. ***European Journal of Biochemistry***, 142, 577-581, 1984.
5. **Ray K**, Vockley J and Harris H: Epitopes of human intestinal alkaline phosphatases, defined by monoclonal antibodies. ***FEBS Letter***, 174, 294-299, 1984.
6. **Ray K**, Bhattacharyya B and Biswas BB: Role of B-ring of colchicine in its binding to tubulin. ***Journal of Biological Chemistry***, 256, 6241-6244, 1981.
7. **Ray K** and Biswas BB: Possible origin of multiple lAA-oxidase and per-oxidase activities in germinating Avena. ***Indian Journal of Experimental Biology***, 18, 1474-1477, 1980.