

Curriculum Vitae

1. Name: **Prof. Chitra Mandal**, PhD, FNASc, FTWAS,
FNA, FASc, FAMS, FAScT



2. Academic Qualifications:

Degree	University	Subjects
B.Sc	The Univ. of Burdwan, West Bengal, India	Chemistry Honours, with Mathematics and Physics
M.Sc	The Univ. of Burdwan, West Bengal	Chemistry with Organic Chemistry special
Ph.D	Indian Institute of Science, Bangalore	Bio-Organic Chemistry: Chemical approaches to penicillin allergy
Post Doc	University of Pennsylvania, Philadelphia, USA With Prof. Fred Karush	Molecular Immunology Monoclonal antibody approach to check antibody diversity Restriction in IgM expression

3. Honours, Awards & Fellowships:

Academic Honours

- ❖ Elected **Fellow** of The National Academy Medical Science (**FNMS**), **2013**
- ❖ Elected **Fellow** of The World Academy of Sciences (**TWAS**) **2012** as recognition of the outstanding contribution to science and its promotion in the developing world
- ❖ Based on her life time commitment to science and achievement, she has been appointment for the post of **Scientist H/Outstanding Scientist** in Biological Science by the President in July **2010** to lead the CSIR-innovation Complex for translation research.
- ❖ Elected **Fellow** of The Indian National Science Academy (FNA.) 2009
- ❖ Elected **Fellow** of West Bengal Academy of Science and Technology (FAScT) 2009

- ❖ Elected **Fellow** of The Indian Academy of Sciences (FASc), 2006
- ❖ Elected **Fellow** of The National Academy of Sciences (FNASc), 2004

- ❖ She has been selected to contribute her autobiography, which has been published in the book entitled “**Lilavati’s Daughters” The women Scientists of India** by Indian Academy of Sciences, Bangalore (<http://tinyurl.com/liladaug>).

Awards

For the outstanding contribution in the field of **biological** and medical Sciences both in applied (transfer of three technologies to the industries) and basic research mainly in the field of tumor immunology, cancer biology and glycoimmunology, she has been awarded the following

1. Dr. Jan Chandra Ghosh Memorial lecture Award (**2015**) by The Science Association of Bengal
2. Prof. Bhim Shanker Trivedi Memorial Medal lecture award (**2014**) by INSA, lecture was delivered on 2nd March 2015 for her contribution in Medical Science
3. Dr. Subodh Mitra Memorial Orientation lecture award (**Nov 2014**) by Chittaranjan National Cancer Institute, Kolkata for her contribution in cancer for the development of diagnosis and MRD
4. Deshratna Dr. Rajendra Prasad Oration Lecture (**2014**) by Rajendra Prasad Institute of Medical Science, Patna for her contribution in the field of leishmaniasis
5. Sir Ronald Ross Memorial Oration lecture (**2014**) by Institute of Post Graduate Medical Education and Research, Kolkata for her contribution in the field of leishmaniasis
6. Awarded ‘**National Woman Bioscientist Award (Senior Category)** by the Department of Biotechnology (DBT) on 8th March **2013**.
7. Received “**Prof. S.S. Katiyar Endowment Lecture award**”(2011-2012) by The Indian Science Congress Association
8. Received “**Dr. Yellapragada SubbaRow Memorial Lecture**” (2011) by The Indian National Science Academy for her contribution in glycobiology
9. Received **J.C. Bose Fellowship award** (2010) by Department of Science and Technology for her major significant contribution in Biology and medical field
10. Received “**Senior Scientist Oration Award**” (2008) by the Indian Immunology Society
11. Received ‘**BioTech Product and Process Development and Commercialization Award** (2005) for the outstanding contribution in the field of medical Sciences both in applied and basic research encompassing mainly in the field of immunochemistry and diagnostic immunology mainly glycol immunology by DBT.
12. Awarded ‘**Kshanika Oration Award**” (**2002**) for the contribution in the field of glycosylation of biomolecules in medicine and their application in medical research by

the ICMR.

13. Received ‘**Smt Chandaben Mohanbhai Patel Industrial Research award**’ (2000) for her contribution to research in Biomedical field. The Award is given by Vividhlaxi Audyogik Samshodhan Vikas Kendra (VASVIK), a non-profit, non-government organisation established in 1973 and run by the owners of the Patel Extrusion Group, with ISO 9002 certified companies, to those who have made important contribution to the advancement of science and technology in India. The prize presented by Prof M.G.K.Menon and Rt Hon John Prescott, Dy Prime Minister of the UK.
14. Awarded ‘The P B Rama Rao Memorial Award’ (2001) for the contribution in the field of Biomedical Sciences by the Society of Biological Chemists.
15. Awarded a fellowship ‘Erwin Riesch Stiftung’ for scientific collaboration at Mannheim, Germany during 24th August –1st September 2001
16. Awarded CSIR -DAAD exchange program 2000 (July 6th-Oct 5th 2000)

Fellowships

- ❖ Received Sir J.C. Bose Fellowship by Department of Science and Technology (DST)

4. List of Publications in indexed journals:

149 [Corresponding author of 114 publications] (Annexure 1)

Co-author of 35 [*8 published during pre and post Doctoral works and 27 through collaborating projects*]

Research Papers: In International Journal (121) & in Indian Journal (5); Review: 16, Chapters in Books: 7; Article published in a book: 4; List of Patents: 15

8. Technology Transfer:

1. Transfer of ELISA based diagnostic technology for detection of Alphafoeto protein, an oncofetal antigen
2. Transfer of antigen based diagnostic technology for diagnosis and monitoring of patients with visceral leishmaniasis
3. Transfer of ELISA based diagnostic technology for detection and monitoring minimal residual disease of children with acute lymphoblastic leukemia

9. Supervision of Research:

Twenty seven students were awarded Ph.D degree and **two** students submitted their thesis, awaiting for viva voce.

Seven students currently are engaged for their Ph.D degree and **two** research associates are working.

Supervised eight M.Sc/MD/MBBS students sponsored by The Indian Academy of Sciences students from different Universities

10. Area of specialization:

Impact of Glycobiology, Glycoimmunology and Tumor Immunology with special emphasis on the role of sialoglycoconjugates to understand the disease biology and its potential applications in biomedical research.

Brief R&D Contribution:

Glycobiology in pathogenic infection and cancer

- Glycobiological approach to understand the altered host innate immune response in leishmanial (*L. donovani*) and bacterial (*P. aeruginosa*) infection
- Proteomic and glycoproteomic approach to identify and validate the disease-associated proteins/glycoproteins and their importance in disease pathogenesis in both leishmanial and bacterial infection
- Proteomic and glycoproteomic study to identify and validate the disease specific proteins and their importance in cancer development
- Define cancer cells by glycoenzymology (glycosylation regulating enzymes) and establish the early response disease specific enzymes as diagnostic markers

Cancer cell signalling, target identification and therapeutics

- Understand the tumor progression and regression in terms of signal cross-talking and development of novel anticancer chemotherapeutics

Perspective of CSCs in cancer and development of futuristic therapy against CSCs

- Understanding of cancer stem cells (CSCs) in glioblastoma multiforme and acute lymphoblastic leukemia in terms of immunophenotype, molecular and developmental aspect
- Designing of the targeted therapeutic protocol and drug delivery systems to overcome CSCs dependent drug resistance and disease relapse

T-cell immunology in cancer

- Understand the T regulatory (Treg) cell mediated immune response in B-cell acute lymphoblastic leukemia

11. Teaching Responsibility:

- ❖ **Training** students for two months since 2011 till date as summer trainee under the sponsorship of Indian Academy of Sciences, Bangalore.
- ❖ **Supervised** many M.Sc/MD/MBBS students sponsored from different Universities/IITs/Institutes
- ❖ **Teaching** advanced course (700 level) on “*Cancer Biology*” at AcSIR, Kolkata for Ph.D. students
- ❖ **Teaching “Glycobiology”** at NIPER, Kolkata, as a Guest faculty member
- ❖ **Deliver an popular lecture** on “*Scientific research: meeting the challenges of Human health*” in a *Science Camp at JBNSTS* for eligible students of class XI (Science) of Bankura, Purulia, Midnapore, Murshidabad, Hooghly and Nadia districts during January 17-21, 2012 organized at the Jagadish Bose Center of Excellence, Kasba, Kolkata.
- ❖ **Teaching MSc and Ph.D students** and college teachers at Manipur University, under the sponsorship of Indian Academy of Sciences, Bangalore. 28-29 March, 2011
- ❖ **Teaching College lecturer** at National Institute for Research in Reproductive Health, Mumbai under the sponsorship of UGC 12th March 2011

Appointed as the external examiner to examine thesis and conduct viva voce examination of a few Ph.D thesis submitted to (i) PGIMER, Chandigarh (ii) Jadavpur University, Kolkata; (iii) J.N.U, New Delhi; (iv) National Institute of Immunology (NII), New Delhi, (v) BHU (vi) CSIR-CDRI (vii) Calcutta University

Membership of Professional Bodies:

1. Indian Society of Translational Research (life Member)
2. Society of Leukocyte Biology
3. Society of Glycobiology
4. Society of Biological Chemist (life Member)
5. Elected as a member of Guha Research Conference (GRC)
6. Indian Immunology Society (Life Member)
7. Member of Molecular Immunology forum (life Member)
8. Indian Association for Cancer Research (life member)
9. Indian Society for Cell Biology (ISCB), (life Member)
10. The Association of Carbohydrate Chemist and technologists of India (ACCTI)
11. Indian Science Congress (life Member)
12. Indian Chemical Society (Life Member)

Referee to Scientific Journals:

BioChimie, Glycobiology, JBC, PLoSOne, Journal of Cellular Physiology, Glycoconjugate Journal, Biol chemistry, Leukemia Research, Apoptosis, Phytotherapy, Indian Journal of Medical Research, Indian Journal of Biochemistry and Biophysics, Journal of genetics, Journal of BioScience etc.

Membership of Scientific Advisory Committees

1. Core Member” of the committee in the area of Life Sciences by Department of Science and Technology (DST) **(2015-2018)**
2. Co-opted Member” of the committee on Health Sciences by Department of Science and Technology (DST) **(2015-2018)**
3. Indian Society of Translational Research (life Member)
4. Serving as a Member of the selection committee for 6th Young Investigator Meeting” October 2014 Boston, USA
5. Serving as a Member of the expert committee for the Innovative Young Biotechnologist Award (IYBA) by DBT **(2014 onwards)**
6. Serving as a Member of the Task Force on Infectious Disease Biology by DBT **(2014)**
7. Serving as a Member of the Institutional Review Board of Tata Medical Center, Kolkata **(2013-onwards)**
8. Serving as a Society Member of the Maulana Abul Kalam Azad Institute (MAKAI) of Asian Studies (an Autonomous body under the ministry of culture , Gov of India **(2011-2015)**)
9. Serving as a Member of the Immunology Task Force Group, ICMR **(2006 - 2014)**
10. Serving as a member of the Sectional Committee-XI (Health Sciences) for a period of three years **(2012- 2014)** by The Indian National Science Academy (INSA), New Delhi
11. Member of the Research Council of Institute of Genomics and Integrative Biology (IGIB), New Delhi.
12. A Member of the NMITLI high power committee
13. A member of various CSIR-selection committees like SPMF, G.N. Ramachandran Gold medal etc.
14. Core Member of the Recruitment and Assessment Board (RAB)
15. Member of the CSIR Committee to review the Biological Sciences projects received under EMPOWER.
16. Member of the experts Group for consideration of NMITLI-IOP R&D Concept Proposals under the Affordable Healthcare category
17. Member of the Advisory Committee for recommending CSIR-Young Scientist Award
18. Member of the selection Committee, CSIR-CGCRI, Kolkata
19. Member of the selection Committee for recruitment of Scientists at CSIR-NCL, Pune, CSIR-CDRI etc.
20. Chairperson of the committee for preparation of Theme Pavilion of CSIR for displaying in 100th Science Congress

Service was provided to CSIR

21. Acting Director
22. Head for CSIR-Innovation complex, Kolkata for translational research
23. Member of the Research Council of Institute of Genomics and Integrative Biology (IGIB), New Delhi.
24. A Member of the NMITLI high power committee
25. A member of various CSIR-selection committees like SPMF, G.N. Ramachandran Gold medal etc.
26. Core Member of the Recruitment and Assessment Board (RAB)
27. Member of the CSIR Committee to review the Biological Sciences projects received under EMPOWER.
28. Member of the experts Group for consideration of NMITLI-IOP R&D Concept Proposals under the Affordable Healthcare category
29. Member of the Advisory Committee for recommending CSIR-Young Scientist Award
30. Member of the selection Committee, CSIR-CGCRI, Kolkata
31. Member of the selection Committee for recruitment of Scientists at CSIR-NCL, Pune, CSIR-CDRI etc.

32. Chairperson of the committee for preparation of Theme Pavilion of CSIR for displaying in 100th Science Congress

Service was provided to CSIR-IICB

33. Acting Director
34. Member of the RAB
35. Member of Administrative Monitoring Committee management Council
36. Member of the Internal Screening/selection Committee for assessment of Scientists
37. Member of the Screening/selection Committee for recruitment of Scientists, technical personals at CSIR-IICB, Kolkata
38. Member of the Appointment Matters & search Committee
39. Member of management Council
40. Chairperson to re-examine the entire policy of Advance and adjustment
41. Chairperson of the collegiums committee under the New performance Mapping System of CSIR
42. Chairperson of prevention of sexual harassment of women at work place

Service to Nation

1. Serving as a member of the Sectional Committee-XI (Health Sciences) by The Indian National Science Academy (INSA), New Delhi
2. Member of the Expert Committee for the Innovative Young Biotechnologist Award by DBT
3. Member of the Institutional Review Board of Tata Medical Center, Kolkata
4. Society Member of the Maulana Abul Kalam Azad Institute (MAKAI) of Asian Studies (an Autonomous body under the ministry of culture, Gov of India (2011-2015))
5. Member of the Immunology Task Force Group, ICMR (2006 - till date)
6. Serving as an executive member of Indian Association for Cancer Research (IACR)
7. Reviewer of manuscripts submitted to many National and International journals
8. Reviewer of projects submitted for funding in UGC, DST, DBT, ICMR, CSIR etc.
9. Invited to deliver a talk at '*Vivekananda Science Circle*' formed with a view to fulfill Swami Vivekananda's mission of establishing science culture in India on the Holy Occasion of the 150th Birth Anniversary of Swami Vivekananda, the Ramakrishna Mission Institute of Culture, Kolkata

Annexure 1

Most significant publications in standard referred journal

Total publications 149 [Corresponding author of 114 publications]

Co-author of 35 [8 published during pre and post Doctoral works and 28 through collaborating projects]

Research Papers: In International Journal (121) & in Indian Journal (5); Review: 16, Chapters in Books: 7; Article published in a book: 4, Patent; 15

2015

1. Aparajita Pal, Dipa Talukdar, Anirban Roy, Subhankar Ray, Asish Mallick, **Chitra Mandal**, Manju Ray (2015) Nanofabrication of methylglyoxal with chitosan biopolymer: a potential tool for enhancement of its anticancer effect” International Journal of Nanomedicine 10, 3499–3518 *Impact factor 5.3* .

2014

2. Sayantani Sarkar, Chandan Mandal, Rajender Sangwan and **Chitra Mandal** (2014) Chk1/Chk2 couples with G2/M cell cycle arrest and perturbed canonical Wnt/ β -catenin pathway to elicit apoptosis in pancreatic adenocarcinoma’ *Endocrine Related Cancer*, 21, 1-14 *Impact factor 5.3*
3. Bhattacharya K, Bag AK, Tripathi R, Samanta SK, Pal BC, Shaha C, **Mandal Chitra** (2014) Mahanine, a novel mitochondrial complex-III inhibitor induces G0/G1 arrest through redox alteration-mediated DNA damage response and regresses glioblastoma multiforme. *Am J Cancer Res*. 4(6):629-47. *Impact factor: 4.17*
4. Ranjita Das, Kaushik Bhattacharya, Suman K Samanta, Bikas C Pal and **Chitra Mandal** (2014) Improved chemosensitivity in cervical cancer to cisplatin: synergistic activity of mahanine through STAT3 inhibition *Cancer Letters* 351, 81-90 (5-Year *Impact factor: 4.544*)
5. Ranjita Das, Kaushik Bhattacharya, Sayantani Sarkar, Suman K Samanta, Bikas C Pal and **Chitra Mandal** (2014) Mahanine synergistically enhances cytotoxicity of 5-fluorouracil through ROS-mediated activation of PTEN and p53/p73 in colon carcinoma *Apoptosis* 19:149-164 *Impact factor: 3.949*
6. Chandan Mandal, Sayantani Sarkar, Uttara Chatterjee, Reinhard Schwartz-Albiez, **Chitra Mandal** (2014) Disialoganglioside GD3-synthase over expression inhibits survival and angiogenesis of pancreatic cancer cells through cell cycle arrest at S-phase and disruption of integrin- β 1-mediated anchorage *The Int J Biochem Cell Biol*, May 16th pii: S1357-2725(14)00173-3, 5-Year *Impact factor: 4.907*
7. Bhattacharya, Kaushik; Chandra, Sarmila; **Mandal, Chitra** (2014) Critical Stoichiometric ratio of CD4+CD25+FoxP3+ Treg and CD4+CD25- Tresp persuades immunosuppression in patient with B-cell Acute Lymphoblastic Leukemia. *Immunology* May;142(1):124-39. *Impact factor 3.8*
8. Saptarshi Roy, G. Aditya Kumar, Md. Jafurulla, **Chitra Mandal***, Amitabha Chattopadhyay* (2014) Integrity of the Actin Cytoskeleton of Host Macrophages is Essential for Leishmania donovani Infection. *Biochim Biophys Acta*. 1838(8):2011-2018. (5yrs average *Impact factor 4.0*) [joint corresponding author]

9. Bag AK, Saha S, Sundar S, Saha B, Chakrabarti A, **Mandal Chitra (2014)** Comparative proteomics and glycoproteomics of plasma proteins in Indian visceral leishmaniasis. *Proteome Sci.* 12 (1):48. *Impact factor 1.88*
10. Biswajit Khatua, Jeremy Van Vleetb, Biswa Pronab Choudhuryb, **Chitra Mandal (2014)** Sialylation of OprD protein: A mechanistic basis of antibiotic uptake in *Pseudomonas aeruginosa*. *Molecular & Cellular Proteomics* 13(6):1412-28. *Impact factor 7.4 5yrs average IF 8.4*
11. R.K Mehta, S Verma, S Mohanty, P. Jena, B. Khatua, R. Jena, S. Sethy, **Chitra Mandal**, K.H. Roehm, and A. Sonawane (2014) Mutations in subunit interface and B-cell epitopes improve antileukemic activities of *Escherichia coli* asparaginase-II: Evaluation of immunogenicity in mice. *J. Biol. Chem* 289, 35555-70 *Impact Factor 5.38*
12. C. D. P. Tripathi, R. Gupta, P. K. Kushawaha, **Chitra Mandal**, S. Misra Bhattacharya & A. Dube (2014) Efficacy of *Withania somnifera* chemotypes NMITLI-101R, 118R and Withaferin A against experimental visceral leishmaniasis *Parasite Immunology* 1-13 *Impact Factor: 2.208*
13. Das M, Bhattacharya K, Dittrick SA, **Mandal Chitra**, Balla VK, Sampath Kumar TS, Bandyopadhyay A, Manna I (2014). [In situ synthesized TiB-TiN reinforced Ti6Al4V alloy composite coatings: Microstructure, tribological and in-vitro biocompatibility.](#) *J Mech Behav Biomed Mater.* Jan 29:259-271. doi: 10.1016/j.jmbbm.2013.09.006. 5-Year *Impact Factor: 3.122*

2013

14. Sarita Roy, Kaushik Bhattacharya, **Chitra Mandal** and Anjan K. Dasgupta (2013) Cellular response to chirality and amplified chirality. *Journal of Materials Chemistry B.* 1:6634-43 DOI: 10.1039/C3TB21322F *Impact factor 6.01*
15. Suman K. Samanta, Devawati Dutta, Sarita Roy, Kaushik Bhattacharya, Sayantani Sarkar, Bikas C. Pal, Chhabinath Mandal, Anjan K. Dasgupta and **Chitra Mandal (2013)** Mahanine, a DNA minor groove binding agent exerts cellular cytotoxicity with involvement of C-7-OH and -NH functional groups. *Journal of Medicinal Chemistry*, 56(14):5709-21. *Impact factor 5.3*
16. S. Sarkar, D. Dutta, S.K Samanta, K. Bhattacharya, B.C Pal, J. Li, K. Datta, CN Mandal, and **Chitra Mandal (2013)** Redox sensitive inhibition of Hsp90 coupled with disruption of super-chaperone complex attenuate pancreatic adenocarcinoma in vitro and in vivo *Int. J. Cancer* 132:695-706. *Impact factor 6.2*

One figure has been selected for cover page of the journal

17. Chandan Mandal and **Chitra Mandal (2013)** Identification and analysis of O-acetylated glycoproteins, A chapter in "Methods in Molecular Biology" Chapter 6, Series Editor Dr. John Walker, Human Press, Springer publishing group, USA 981:57-93.
18. Biswajit Khatua, Saptarshi Roy and **Chitra Mandal (2013)** Sialic acids siglec interaction: A unique strategy to circumvent innate immune response by pathogens. An invited review *Indian Journal of Medical Research* 138(5):648-62

2012

19. B. Khatua, K. Bhattacharya, **Chitra Mandal (2012)** α 2,3 linked Sialic acids acquired by *Pseudomonas aeruginosa* facilitate their survival by impeding neutrophil extracellular trap through siglec-9. *Journal of Leucocyte Biology*, 91, 641-55. Epub Jan 11 (*Impact factor 4.992*)

This work has been highlighted in Aalatiimes English News paper (www.aalatiimes.com/2012/11/20/Indin-scientists-unravel-secret-behind-hospital-infection)

20. Sajal Samanta, Angana Ghoshal, Kaushik Bhattacharya, Bibhuti Saha, Peter Walden and **Chitra Mandal (2012)** Sialoglycosylation of RBC in visceral leishmaniasis leads to enhanced oxidative stress, calpain-induced fragmentation of spectrin and hemolysis PLoS ONE 7(7):e42361.doi: 10.1371/journal.pone.0042361. Epub 2012 Jul 31. (*Impact factor 4.411*)
21. Susmita Mondal, K. Bhattacharya, A. Mallick, R. Sangwan and **Chitra Mandal (2012)** Bak compensated for Bax in p53-null Cells to Release Cytochrome c for the Initiation of Mitochondrial Signaling during Withanolide D-induced Apoptosis. PLoS ONE 7(3): e34277. Epub 2012 Mar 29 (*Impact factor 4.411*)
22. Chandan Mandal, Chhabinath Mandal, S. Chandra, R. Schauer and **Chitra Mandal (2012)** Regulation of *O*-acetylation of sialic acids by sialate-*O*-acetyltransferase and sialate-*O*-acetyltransferase activities in childhood acute lymphoblastic leukemia *Glycobiology* 22:70-83. (*Impact factor 4.446*)
23. S. Mondal, S. Bandyopadhyay, M. K Ghosh, S. Mukhopadhyay, S. Roy and **Chitra Mandal (2012)**. Natural products: **Promising resources for cancer drug discovery**. *Anti Cancer Agents in Medicinal Chemistry*, 12, 49-75 *Impact factor 3.14* (formerly Current Medicinal Chemistry) (*last 5 yr average Impact factor 4.96*)
24. S. Kushwaha, S. Roy, R. Maity, A. Mallick, VK. Sonia, PK. Singha, ND. Chaurasiya, R. S. Sangwan, S. Misra-Bhattacharya, **Chitra Mandal (2012)** Chemotypical variations in *Withania somnifera* lead to differentially modulated immune response in BALB/c mice. *Vaccine*, 30, 1077-1087 (*Impact factor 3.616*)
25. Chitra Mandal, R. Schwartz-Albiez and R. Vlasak (**2012**) Functions and biosynthesis of *O*-acetylated sialic acids. A Review "Topics in Current Chemistry" Volume: SialoGlyco Chemistry and Biology, Volume Editors: Rita Gerardy-Schahn, Philippe Delannoy, Mark von Itzstein, Feb 28, DOI: 10.1007/128_2011_310 2, Springer-Verlag Berlin Heidelberg (*Impact factor 4.53*)
26. Chowdhury S, Mandal C, Sarkar S, Bag AK, Vlasak R, Chandra S, **Mandal Chitra (2012)** [Mobilization of lymphoblasts from bone marrow to peripheral blood in childhood acute lymphoblastic leukaemia: Role of 9-O-acetylated sialoglycoproteins](#). *Leukemia Res* 36, 146-55 (*Impact factor 2.55*)
27. S. Mondal, S. Roy, R. Maity, A. Mallick, R. Sangwan, S. Misra-Bhattacharya and **Chitra Mandal (2012)** Withanolide-D, carrying the baton of Indian Rasayana herb as a lead candidate of anti-leukemic agent in modern medicine. *Advances in Experimental Medicine and Biology* 749, DOI 10.1007/978-1-4614-3381-1_20, © Springer Science+Business Media New York *Impact factor: 2.02*

2011

28. S. Samanta, D Dutta, A Ghoshal, S Mukhopadhyay, B Saha, S Sundar, S Jarmalavicius, M Forger, CN Mandal, P Walden and **Chitra Mandal (2011)** Glycosylation of erythrocyte spectrin and its modification in visceral leishmaniasis *PLOS one*, 6 (12): e28169. doi:10.1371/journal.pone.0028169 (*Impact factor 4.411*)
29. Mandal Chitra, Roychoudhury S, Roy S. (**2011**) Cancer research: India meets the West. *Cell Death Differ*. 18, 1675–1677, Jun 17. doi: 10.1038/cdd.2011.85. [Epub ahead of print] (*Impact factor 9.05*)

30. K. Mukherjee, S. Chowdhury, S. Mondal, Chandan Mandal, S. Chandra and **Chitra Mandal (2011)** 9-O-Acetyl GD3 in lymphoid and erythroid cells. *The Molecular Immunology of Complex Carbohydrate 3, Adv Expl Med and Biol*, 705, Chapter 15, 317-334, Edited by Albert M. Wu, Chang-Gung University, Tao-Yuan, Taiwan, Springer publishing Group (*Impact factor: 2.02*)
31. Ghoshal A and **Chitra Mandal (2011)** A perspective on the emergence of sialic acids as potent determinants affecting Leishmania biology. *Mol Biol Int.* 532106

2010

32. K. Bhattacharya, S.K. Samanta, R. Tripathi, A. Mallick, S. Chandra, BC. Pal, C. Shaha and **Chitra Mandal (2010)** Apoptotic effects of mahanine on human leukemic cells are mediated through cross talking between Apo-1/Fas signaling with Bid protein and via mitochondrial pathways. *Biochemical Pharmacology* **79**: 361-72.
Impact factor 4.9
33. Chandan Mandal, C. Tringali, S. Mondal, L.A, S. Chandra, V. Burno and **Chitra Mandal (2010)** Down-regulation of membrane-bound Neu3 is negatively correlated with disease progression and associated with apoptosis suppression of lymphoblasts in childhood acute lymphoblastic leukemia. *International J Cancer* **126**:337-349 (*Impact factor 5.441*)
34. A Ghoshal, G.J. Gerwig, J.P. Kamerling, and **Chitra Mandal (2010)** Sialic acids in different *Leishmania spp.*, its correlation with nitric oxide resistance and host responses. *Glycobiology* **20**: 553-66. (*Impact factor 4.446*)
35. S Mondal, Chandan Mandal, RS, S Chandra, **Chitra Mandal (2010)** Withanolide D induces apoptosis in leukemia by targeting the activation of neutral sphingomyelinase-ceramide cascade mediated by synergistic activation of c-Jun N-terminal kinase and p38 mitogen-activated protein kinase. *Molecular Cancer* **9**, 239 (*Impact factor 5.36*)
36. Pattanayak (Mohanty) S, Ray J, Dhariwal R, Mukherjee S, **Mandal Chitra**, Chaudhuri K (2010) Melanotic neuroectodermal tumour of infancy: A case report of two cases with review of literature. *BMJ Case Reports* **21**, 895-900 (*Impact Factor 12.27*)
37. Khatua B, Ghoshal A, Bhattacharya K, Mandal Chandan, Saha B, Crocker PR, **Mandal Chitra. (2010)**. Sialic acids acquired by *Pseudomonas aeruginosa* are involved in reduced complement deposition and siglec mediated host-cell recognition. *FEBS Lett.* **584**, 555-561 *Impact factor 3.60*
38. Jain R, Ghoshal A, **Mandal Chitra**, Shaha C. (2010) Leishmania cell surface prohibitin: role in host-parasite interaction. *Cell Microbiol.* **12**, 432-52. (*Impact factor 5.725*)
39. Chowdhury R, Chatterjee R, Giri AK, **Mandal Chitra**, Chaudhuri K (2010) [Arsenic-induced cell proliferation is associated with enhanced ROS generation, Erk signaling and CyclinA expression.](#) *Toxicol Lett* **198**, 263-71(*Impact Factor 3.249*)
40. S. Mondal, C. Mandal, S. Chandra and **Chitra Mandal (2010)** Elevated mRNA level of hST6Gal I and hST3Gal V positively correlates with the high risk of pediatric acute leukemia. *Leukemia Research* **34**, 463-470 (*Impact factor 2.55*)
41. Samanta SK, Bhattacharya K, **Mandal Chitra**, Pal BC (2010) Identification and quantification of the active component quercetin 3-O-rutinoside from *Barringtonia racemosa*, targets mitochondrial apoptotic pathway in acute lymphoblastic leukemia. *J Asian Nat Prod Res.* **12**, 639-48. (*Impact factor 0.778*)

42. **Chitra Mandal**, S. Bhattacharya, C Nath, G. Palit, R. Raghubir, YS Bedi (2009) *In vivo* and *in vitro* Pharmacological and biochemical activities of ashwagandha crude herbs and extracts. *Monograph, Ashwagandha (Withania somnifera), A model Indian Medicinal Plant* Chapter 13, page 198-244
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