

Curriculum Vitae

Name: DR. GANDHI KUMAR KAR

Present Position: Professor of Chemistry and Head of the Department.

Contact Address: Department of Chemistry, Presidency University, 86/1 College Street, Kolkata-700073, India.

Present Residential Address: Bivabati Apartment (Flat No. 2B), 55A Dum Dum Road, Kolkata 700074, W.B.

Date of birth: January 01, 1958

Father's Name: Late Karali Kumar Kar

Nationality: Indian. **Sex:** Male. **Marital Status:** Married

Educational Attainments (Degree / Year / Board or University / Class or Div. / Remarks):

1. School Final (1973) / W. B. S. E / 1st Div., (Rank 25th in the Board).
2. Univ. Entrance (1974) / Burdwan University / 1st Div.
3. B. Sc. (Chem. Hons) (1977) / Burdwan University / 1st Class (Rank 4th in the University).
4. M. Sc (Chem.; Organic Spl.) (1980)* / I. I.T, Kharagpur / 1st class (equiv.),** (Rank 3rd at IIT Kharagpur)
5. Ph. D (Synthetic Organic Chemistry)*** (1986) / I. I. T, Kharagpur.

[*Result of B.Sc Hons of 1977 was published in 1978 and was admitted in M.Sc 1978-80 session.

** As per senate decession no class / division is awarded in M.Sc level (Marks obtained 77.17%)

***Title of the Thesis: “**Studies on lactams and other heterocyclic compounds**” (Supervisors:

Prof. B. G. Chatterjee & Prof. J. K. Ray, Department of Chemistry, I. I. T. Kharagpur)].

Teaching experience: 27 years (U.G, Chemistry Hons) and 11 years (P.G., Chemistry)

[Joined W.B.E.S as lecturer in chemistry in 1986 (**Stood 1st in the P. Sc Pannel**).

Served at Maulana Azad College, Kolkata (under C.U) (1986-1990; as Lecturer), Jhargram Raj College, West Midnapore (under V.U) (1990-2002; as Asst. Professor and Reader), Presidency College, Kolkata (under C.U) (2002-2010; as Reader and Associate Professor), Presidency University (formerly Presidency College), Kolkata (2010-July 19, 2012; as Associate Professor). Presidency University, Kolkata (July 20, 2012 to till date; as Professor of Chemistry).

Research experience: About 30 years [including M.Sc project work, Work for Ph.D Degree, post doctoral and collaborative work with the group of Prof. J. K. Ray, I.I.T. Kharagpur].

Field of Research: Synthetic Organic Chemistry [Synthesis of β -lactams and γ -lactams, furo-natural products (furoterpenes, furoquinone diterpenoids), pyridocarbazoles, pyrroloindoles, polycyclic aza-arenes and thia-arenes and their oxidative metabolites etc. of biological importance.]

Number of students awarded with Ph D Degree under my supervision: 02

1.**Dr. Khokan Samanta (2012):** “Derivatives of phenanthrenes and phenanthraquinones: Synthesis via Suzuki coupling and other reactions.”

2. **Dr. Prasanta Patra (2012)** “Synthesis of Structurally Designed γ -Lactams and Other Oxa-aza Heterocyclic as Possible Antibacterial Agents.”

Total number of Ph.D students currently working under my supervision: **04** (Ph.D. registration of all of them already completed under Calcutta University and **writing of thesis of two more students** are under progress).

Number of M.Sc Projects (thesis) supervised: 15

[Name of the Student (Year) / Title of the M.Sc. Project.]

1. **Biswajit Khatua (2007)**; "Studies towards the synthesis of pyridocoumarin derivatives."
2. **Krishanu Shaw (2007)**; "Studies on the modified Schmidt reaction to synthesise areno-lactam --- a way towards the synthesis of pyridocarbazole."
3. **Avijit Banik(2008)**; "Studies on Suzuki coupling reactions of 2-bromocyclohexenal derivatives and thiophene boronic acid: A step towards the synthesis of polynuclear thienoquinones."
4. **Aparna Sarkar (2008)**; "Design and synthesis of novel γ -lactam derivatives as possible antibacterial agent."
5. **Gautam Mandal (2009)**; "Side chain modification in γ -lactam moiety: A way towards the synthesis of monocyclic N-aryl γ -lactam derivatives as possible antibacterial agent."
6. **Prabir Kumar Das (2009)**; "Studies on synthesis of cavity shaped polycyclic diazaarenes: Synthesis of quinolino[8,7-h]quinolines."
7. **Pritha Agarwal (2010)**; "An approach towards the synthesis of cavity shaped polynuclear thiophene derivative."
8. **Sujan Kumar Mandal (2010)**; "An approach towards the synthesis of 10-bromophenanthro[4,3-b]- thiophene-4,5-dione: a novel polynuclear thienoquinone."
9. **Abhisek Ghatak (2011)**; "Chemoselective & regioselective Pd(II) catalyzed vinylation in C₄-heteroaryl part of β -lactam derivatives via C-H bond activation: Synthesis of functionalized monocyclic β -lactams."
10. **Tamashree Ghosh (2011)**; "Chemoselective & regioselective Pd(0) catalyzed vinylation in N-aryl part of β -lactam derivative via C-Br bond activation: Synthesis of functionalized monocyclic β -lactam."
11. **Madhurima Das (2012)**; "Thermolysis of chlorovinyl imines as an alternate route for preparation of polycyclic azaarenes: Synthesis of 8-phenyl-3H-pyrano[3,2-f]quinolin-3-one by thermal cyclization of 6-[(E)-(Z)-3-chloro-3-phenylallylidene)amino]-2H-chromen-2-one."
12. **Sanjit Das (2012)**; "1-Aryl and C₃-Heteroaryl modification of γ -lactam derivatives: Chemoselective ethenylation via Heck reaction and Dehydrogenative Heck reaction in 1-(4-bromophenyl)-5-oxo-3-(thiophen-2-yl)pyrrolidin-2,2-dicarboxylic ester."
13. **Ipsita Chakraborty (2013)**; "N-Aryl modification in monocyclic γ -lactam carboxylic esters via Suzuki reaction: An approach towards the synthesis of novel γ -lactam antibacterial agents."
14. **Mainak Banerjee (2013)**; "Model synthetic study of Wittig and Julia olefination towards the total synthesis of Pleraplysillin-I."
15. **Sandip Kumar De (2013)**; "Studies towards the synthesis of polynuclear triazole derivatives: One pot Sonogashira coupling and intramolecular Click reaction of β -bromo-allyl azide derivatives with phenyl acetylene."

Awards and Distinctions: (i) National Scholarship (1973-1977). (ii) M.C.M Scholarship (IIT KGP) 1978-1980. (iii) CSIR fellowship (individual) (JRF: 1981-1983 and SRF: 1983-1986). (iv) Convention Award (Indian Chemical Society): 1991(44th Annual Convention of Chemist /Indian Chemical Society).

Reviewer: (a) *Chemical Review* (American Chemical Society).

(b) *J. Ind. Chem.. Soc.* (Indian Chemical Society).

(c) *Monatshefte fur Chemie* (Springer).

Member of professional bodies: (i) Indian Association for the Cultivation sciences (Life member).
(ii) Indian Chemical Society.

Number of Publications: (in peer reviewed journals): 49 (published / accepted).

List of publications:

Papers published with the group of Prof. J. K. Ray, I.I.T Kharagpur:

1. Studies on the synthesis of some 9-aryl-9-aza-2,8-dioxo-4,5-benzobicyclo[4,3,0]nonane, a new heterocyclic system. M. Ghosh, **Gandhi K. Kar**, J. K. Ray, B. G. Chatterjee.
Synthetic Communications, **1983**, *13*(8), 667-675. (d.o.i: 10.1080/003979183080603480).
2. Studies on polycyclic azaarenes, Part-I: Synthesis of acenaphtho[1,2-b]quinolines. J. K. Ray, **Gandhi K. Kar**, B. G. Chatterjee; **Tetrahedron**, **1984**, *40*(15), 2959-2960.
(d.o.i: 10.1016/S0040.4020(01)91307.9).
3. Synthesis of acenaphtho[1.2-b]benzo[d]thiophene. **Gandhi K. Kar**, B. G. Chatterjee, J. K. Ray; **Org.Prep. & Procedures International (OPPI)**, **1988**, *20*(3), 213-222.
(d.o.i: 10.1080/00304948809355813).
4. Studies on new β -lactams: Synthesis of 3-oxacepham derivatives. **Gandhi K. Kar**, B. G. Chatterjee, J. K. Ray; **Indian J. Chemistry**, **1988**, *27B*, 786-789.
5. Studies on polycyclic azaarenes, Part-2: Synthesis of *trans* 3,4-dihydroxy-3,4-dihydrobenz[c]-acridine and *trans* 8,9-dihydroxy-8,9-dihydrobenz[c]acridine. D. Ramesh, **Gandhi K. Kar**, B. G. Chatterjee, J. K. Ray; **J. Org. Chem.**, **1988**, *53*(1), 212-214. (d.o.i: 10.1021/jo00236a049).
6. Regioselective cyclisation of anil derivatives--- a short synthesis of dibenzacridines. **Gandhi K. Kar**, A. C. Karmakar, J. K. Ray; **Tetrahedron Lett.**, **1989**, *30*(2), 223-224. (d.o.i: 10.1016/S0040-4039(00) 95185-7).
7. Synthesis and thermolysis of cycloalkenyl azides: a simple route to polycyclic isoxazoles. I. Sami, **Gandhi K. Kar**, J. K. Ray; **Org. Prep. & Procedures International (OPPI)**, **1991**, *23*(2), 186-188. (d.o.i: 10.1080/00304949109458307).
8. Studies on polycyclic azaarenes-3: Stereoselective synthesis of *trans* 10,11-Dihydroxy-10,11-dihydrodibenz[a,h]acridine and *trans* 8,9-dihydroxy-8,9-dihydroacenaphtho[1,2-b]quinoline. J. K. Ray, **Gandhi K. Kar**, A. C. Karmakar; **J. Org. Chem.**, **1991**, *56*(6), 2268-2270.
(d.o.i: 10.1021/jo0006a063)
9. Studies on polycyclic thiaarenes: Part-II. An improved synthesis of phenanthro[1,2-b]thiophene and a synthesis of acenaphtho[1,2-b]naphtha[2,3-d]thiophene, a novel polynuclear thiaarene. **Gandhi K. Kar**, A.C. Karmakar, J. K. Ray; **J. Heterocyclic Chem.**, **1991**, *28*, 999-1002.
(d.o.i: 10.1002/jhet5570280428).
10. Efficient synthesis of 5-desmethyl-6-demethyliso- ellipticine and utilization of the methodology to prepare angular and linear pyridocarbazoles. A. C. Karmakar, **Gandhi K. Kar**, J. K. Ray; **J. Chem. Soc. Perkin Trans-I**, **1991**, 1997-2002. (d.o.i: 10.1039/P19910001997).
11. Synthesis of polycyclic oxacoumarins --- potential antitumour agents and a short and convenient method for the synthesis of naphthopyrano quinolines from naphthopyran chloroaldehydes. I. Sami, **Gandhi K. Kar**, J. K. Ray; **Tetrahedron**, **1992**, *48*(24), 5199-5208. (d.o.i:10.1016/S0040.4020(01) 90128.0).

12. Regioselective thermal cyclisation of N-aryl-4-chloro-1-aza-1,3-butadiene derivatives. A short and efficient synthesis of dibenz[c,h]acridines. **Gandhi K. Kar**, I. Sami, J. K. Ray; **Chemistry Letters**, **1992**, 21(9), 1739-1742.
13. A 'One flask' synthesis of 8,9,10,11-tetrahydrobenz[a] and 8,9,10,11-tetrahydrobenz[c]acridine. M. K. Halder, **Gandhi K. Kar**, J. K. Ray; **J. Chem. Research(S)**, **1993**, 46.
14. A convenient synthesis of tricyclic γ -lactams, simulating B-C-D rings of azasteroid via Michael addition reaction. **Gandhi K. Kar**, B. G. Chatterjee, J. K. Ray; **Synthetic Communications**, **1993**, 23(14), 1953-1958. (d.o.i:10.1080/00397919308009853).
15. Assessment of mutagenic activity of some acenaphtho[1,2-b]quinolines. J. K. Ray, **Gandhi K. Kar**; **Cancer Letters**, **1993**, 71, 1-3. (d.o.i:10.1016/0304.3835(93)90088.Q).
16. A simple and new synthetic method for the preparation of 2-phenyl-6-substituted quinolines. B. C. Roy, **Gandhi K. Kar**, J. K. Ray; **Synthetic Communications**, **1993**, 23, 1959-1965. (d.o.i:10.1080/00397919308009854).
17. Structurally designed novel furogamma-lactams as inhibitor for bacterial propagations. J. K. Ray, I. Sami, **Gandhi K. Kar**, B. C. Roy, N. K. Brahma; **Bioorg. and Medicinal Chem.**, **1994**, 2(12), 1417-1421. (d.o.i: 10.1016/S0968-0896(00)82094-5).
18. Regioselective thermal cyclisation of 3-substituted aryl enaminoimine hydrochlorides, a convenient method for the synthesis of functionalized polycyclic quinoline derivatives. **G. K. Kar**, A. C. Karmakar, A. Makur (nee Chatterjee), J. K. Ray; **Heterocycles**, **1995**, 41(5), 911-919. (d.o.i: 10.3987/COM-94-6810).
19. *Trans* 4,4a,6,7,8,8a-hexa-hydro-8a-methylnaphtho[2,3-b]furan-5,9-dione. J. K. Ray, **Gandhi K. Kar**, G. D. Nigam, S. Kundasamy, H. K. Fun; **Acta Cryst.**, **1995**, C51, 2090-2092. (d.o.i:10.1107/S010827019500535X).
20. Alkyl lithiums as alkylating agents: Regioselective alkylations in the semi bay regions of polycyclic azaarenes. J. K. Ray, B. C. Roy, **Gandhi K. Kar**; **J. Org. Chem.**, **1996**, 61(5), 1863-1866. (d.o.i: 10.1021/jo951848m).
21. A one pot synthesis of acenaphtho[1,2-b]benzo[f]- and acenaphtho[1,2-b]benzo[h]quinoline. J. K. Ray, **Gandhi K. Kar**, M. K. Halder; **Synthetic Communications**, **1996**, 26(21), 3959-3965. (d.o.i:10.1080/ 0039791960803818).
22. Synthetic studies towards furanosesquiterpenes: Construction of linearly fused A/B *trans*- and A/B *cis* furo[3,2-b]- and furo[2,3-b]decalins. A. Chakraborty, **Gandhi K. Kar**, J. K. Ray; **Tetrahedron**, **1997**, 53(8), 2989-2996. (d.o.i:10.1016/S0040.4020(97)00053.7).
23. (a) Studies on gamma lactams: Synthesis of 3-aryl-1,3a,4,9b-tetrahydrobenzo[e]indole-2,5-dione derivatives and its implication in the total synthesis of functionalized 17-azasteroid. **Gandhi K. Kar**, D. Ramesh, B. G. Chatterjee, J. K. Ray; **J. Chem. Research(M)**, **1997**, 568-583.
(b) Studies on gamma lactams: Synthesis of 3-aryl-1,3a,4,9b-tetrahydrobenzo[e]indole-2,5-dione derivatives and its implication in the total synthesis of functionalized 17-azasteroid. **Gandhi K. Kar**, D. Ramesh, B. G. Chatterjee, J. K. Ray; **J. Chem. Research (S)**, **1997**, 80-81.
24. Studies on furoterpenes: Stereoselective total synthesis of ($\pm$) ambliol-A and Dendrolasin. A.

Chakraborty, **Gandhi K. Kar**, J. K. Ray; **Tetrahedron**, **1997**, 53(25), 8513-8518. (d.o.i:10.1016/S0040-4020(97)00509-7).

25. Thermolysis of N-aryl β -chlorovinylimines: Synthesis of 7,13-dibutyl-4-phenanthridino[3,2-a]-4-phenanthridino[2,3-j]anthracene, a novel cavity shaped diazarene. M. K. Haldar, **Gandhi K. Kar**, J. K. Ray; **Synlett**, **1997**, 9, 1057-1058. (d.o.i: 10.1055/s-1997-1534).

26. Synthesis of some thieno γ -lactam monocarboxylic acids with high antibacterial activity: a new look at an old molecular system. **Gandhi K. Kar**, B. C. Roy, S. Das Adhikari, J. K. Ray, N. K. Brahma; **Bioorg. and Medicinal Chem.**, **1998**, 6(12), 2397-2403. (d.o.i: 10.1016/S0968-0896(98)80015-1).

27. Studies on cavity shaped polycyclic thiaarenes: Short and efficient synthesis of 2,12-didemethyl-anthra[1,2-b][8,7-b]bisthiophene and anthra[1,2-b]thiophene. **Gandhi K. Kar**, M. K. Haldar, S. Gupta, D. Pan, J. K. Ray; **J. Ind. Chem. Soc.**, **1999**, 76, 569-573 (commemorative issue).

28. Synthesis of a new family of receptors having dibenz[c,h]acridine as spacers and their binding affinity with urea. J. K. Ray, M. K. Haldar, S. Gupta, **Gandhi K. Kar**; **Tetrahedron**, **2000**, 56(6), 909-912. (d.o.i: 10.1016/S0040-4020(99)01080-7).

29. Stereoselective synthesis of 1,6-dichloro-1,3,5-hexatriene derivatives by McMurry coupling of β -chloroacrylaldehyde derivatives. S. Gupta, **Gandhi K. Kar**, J. K. Ray; **Synthetic Communications**, **2000**, 30(13), 2393-2399. (d.o.i:10.1080/00397910008086881).

30. Highly site selective alkylation of cavity shaped aza-heterocycles by alkyl lithium and alkyl halides. D. Pan, B. C. Roy, **Gandhi K. Kar**, J. K. Ray; **J. Chem. Soc. Perkin Trans I**, **2000**, issue-11, 2171-2173. (d.o.i: 10.1039/b003492o).

31. Studies on the synthesis of *trans* dihydrodiols of polycyclic aromatic thiaarenes as potential proximate metabolites: first synthesis of *trans* 10,11-dihydroxy-10,11-dihydroacenaphtho[1,2-b]-benzo- [d]thiophene and 6,7-dihydroxy-6,7-dihydronaphtho[1,2-b]thiophene. J. K. Ray, S. Gupta, **Gandhi K. Kar**, B. C. Roy, J-Ming Lin, S. Amin; **J. Org. Chem.**, **2000**, 65(24), 8134-8138. (d.o.i: 10.1021/jo005502+).

32. Molecular recognition: Studies on the synthesis of some carboxamide derivatives as ditopic receptors for long chain dicarboxylic acids. J. K. Ray, S. Gupta, D. Pan, **Gandhi K. Kar**; **Tetrahedron**, **2001**, 57(33), 7213-7219. (d.o.i:10.1016/S0040-4020(01)00676-7).

33. Studies on polycyclic fluoroazaarenes: Synthesis of *trans* 9-fluoro- and 11-fluoro-3,4-dihydroxy-3,4-dihydrobenz[c]acridine as potential proximate carcinogenic metabolite of fluoro benz[c]-acridine. D. Pan, **Gandhi K. Kar**, J. K. Ray, J. M. Lin, S. Amin, S. Chantrapromma, H. K. Fun ; **J. Chem. Soc. Perkin Trans I**, **2001**, 1issue-19, 2470-2475. (d.o.i: 10.1039/b102750f).

34. Chemoselective method for the synthesis of 4-hydroxy-4-allylcyclohexa-2,5-dione derivatives from 1,4-quinones by Indium mediated allylation protocol. D. Pan, S. K. Mal, **Gandhi K. Kar**, J. K. Ray; **Tetrahedron**, **2002**, 58(14), 2847-2852. (d.o.i:10.1016/S0040-4020(02)00133-3).

35. Indium mediated allylation of β -chloro / β -alkoxyvinyl aldehyde: A facile one pot synthesis of 1-chloro /1-alkoxyhexadiene-3-ol derivatives. . D. Pan, **Gandhi K. Kar**, J. K. Ray; **Synthetic Communications**, **2003**, 33(1), 1-9. (d.o.i:10.1080/SCC-120015553).

36. Highly regioselective rhodium (II) catalysed carbenoid insertion reaction into sp^2 C-H bond: a

general method for the synthesis of 3,3a-dihydro-2H,5H-pyrrole[1,2-a]quinoline-1,4-dione ring system. P. Haldar, **Gandhi K. Kar**, J. K. Ray; **Tetrahedron Lett.**, **2003**, 44(40), 7433-7435. (d.o.i: 10.1016/j.tetlet. 2003.08.037).

37. Direct regioselective phenylation of acridine derivatives by phenyl lithium. B. P. Dutta, **Gandhi K. Kar**, J. K. Ray; **Tetrahedron Lett.**,**2003**, 44(48),8641-8643. (d.o.i:10.1016/j.tetlet.2003.09.167).

38. Synthetic studies towards furosesquiterpenes: Total synthesis of (±) desmethylpallescensin-1, (±) isopallescensin-A and (±)isopallescensin-1. S. K. Mal, **Gandhi K. Kar**, J. K. Ray; **Tetrahedron**, **2004**, 60(12), 2805-2811. (d.o.i:10.1016/j.tet.2004.01.068).

List of papers published from Presidency College / Presidency University as supervisor and communicating author

39. A generalized route to the synthesis of β-furyl-α, β-unsaturated aldehydes through Suzuki reactions.” K. Samanta, **Gandhi K. Kar**, A. K. Sarkar; **Tetrahedron Lett.**, **2008**, 49(9), 1461-1464. (d.o.i: 10.1016 /j.tetlet.2008.01.010).

40. Studies on polynuclear furoquinones. Part-1: Synthesis of tri- and tetra cyclic furoquinones simulating BCD/ABCD ring system of furoquinones diterpenoids. F. H. Shaik, **Gandhi K. Kar**; **Beilstein Journal of Organic Chemistry (BJOC)**, **2009**, 5, No. 47 (pp 1-7). (d.o.i: 10.3762/bjoc.5.47).

41. Thermolysis of N-arylenamino-N-arylimine hydrochloride derivatives: A short and improved synthesis of 2-methylthieno[2,3-c]acridine derivatives. T. B. Maiti , **Gandhi K. Kar**; **Heterocycles**, **2009**, 78(12), 3073-3080. (d.o.i: 10.3987/COM-09-11816).

42. Catalyst and steric controlled alkenylation *via* chemoselective C-H activation and C-Br activation in Heck reaction of methyl 1-(2-bromoaryl)-3-(2-furyl/thienyl)-5-oxopyrrolidine-2-carboxylates and diethyl 1-(2-bromoaryl)-3-(2-furyl/thienyl)-5-oxopyrrolidine-2,2-dicarboxylate derivatives. P. Patra, J. K. Ray, **Gandhi K. Kar**; **Tetrahedron Lett.**, **2010**, 51(27), 3580-3582. (d.o.i: 10.1016/j.tetlet.2010.05.005).

43. Short and general method for the synthesis of 2-halocyclo- alk-1-enecarboxylic esters from 2-halocycloalk-1-enecarbaldehyde. R. Das, F. H. Shaik, **Gandhi K. Kar**; **Indian J. Chem.**, **2011**, 50B, 299-303.

44. N-Aryl modification in γ-lactam: Design and synthesis of novel monocyclic γ-lactam derivatives as inhibitor for bacterial propagation. Prasanta Patra, **Gandhi K. Kar**, Aparna Sarkar, Jayanta Ray, Tista Dasgupta, Mahua Ghosh, Sugata Bhattacharya; **Synthetic Communications** **2012**, 42, 3031-3041. (d.o.i: 10.1080/00397911.2011.574807).

45. Intramolecular gold(III) catalysed Diels-Alder reaction of 1-(2-furyl)-hex-1-en-5-yn-3-ol derivatives: A short and generalized route for the synthesis of hydroxyphenanthrene derivatives. K. Samanta, **Gandhi K. Kar**, A. K. Sarkar; **Tetrahedron Lett.** **2012**, 53, 1376-1379 (d.o.i 10.1016/j.tetlet.2012.01.018).

46. Studies towards the synthesis of Chrysen-6-ol and Benzo[c]phenanthren-5-ol derivatives: Usual and unusual observations. K. Samanta, **Gandhi K. Kar**, A. K. Sarkar; **Polycyclic Aromatic Compounds** **2012**, 32, 515-530 (DOI: 10.1080/10406638.2012.679016).

47. Pyrolysis of calcium salt of alkoxybenzoic acids fails to produce diarylketones: An unusual

observation. K. Samanta, A. K. Sarkar, **Gandhi K. Kar**; *Synthetic Communications* **2013**, 43, 384-391 (DOI: 10.1080/00397911.2011.599195).

48. Thermolysis of N-aryl enaminoimine hydrochloride derivatives: A short and general method for the synthesis of pyranoquinolin-3-one and pyranoacridin-3-one derivatives. P. Patra, **Gandhi K. Kar**, B. Khatua; *J. Heterocyclic Chem.* **2013** (in press).

49. An efficient, general, synthesis of 2-substituted 2H,6H-pyrrolo[3,2-e]indoles involving one-pot Sonogashira coupling and cyclisation. Moumita Rakshit, Taraknath Kundu, **Gandhi K. Kar**, Manas Chakrabarty; *Monatsh Chem.* **2013**, 144(5), 717-724 (DOI: 10.1007/ss00706-012-0859-5).

Posters presented in National / International Symposium:

A) International Conference/Symposium:

1. Synthesis of dihydrodiols as potential proximate carcinogens of benz[c]acridines. J. K. Ray, **G. K. Kar**, B. G. Chatterjee; *Proceedings of the 9th International Congress of Heterocyclic Chemistry*, **1983**, page no. 20; Tokyo (Japan).

2. Alkyl lithiums as alkylating agents: Regioselective alkylation in the semi bay region of novel aromatic polycyclic monoazaarenes. J. K. Ray, B. C. Roy, **G. K. Kar**; *Proceedings of the ISN-8, 8th International Symposium on Novel Aromatic Compounds*, **1995** (July-Aug.), Branschweig, Germany.

3. Studies on the synthesis of trans dihydrodiols of polyaromatic thiaarenes as potential proximate metabolites: First total synthesis of 10,11-dihydroxy-10,11-dihydroacenaphtho[1,2-b]benzo[d]-thiophene. J. K. Ray, S. Gupta, **G. K. Kar**; *Proceedings of the 17th International Symposium on Polycyclic Aromatic Compounds*, **1999** (October 25-29), Bordeaux, France.

4. Studies on cavity shaped polycyclic fluoroazaarenes: Synthesis of *trans* 9-fluoro-3,4-dihydroxy-3,4- dihydrobenz[c]acridine as potential proximate carcinogenic metabolite of 9-fluorobenz[c]-acridine. D. Pan, **G. K. Kar**, J. K. Ray; *Proceedings of the International Conference on Chemistry and 36th Annual Convention of Chemist (Platinum Jubilee Celebration of Indian Chemical Society)*, **1999** (December 11-16), Kolkata, India.

5. (Poster Presentation/ Poster no P-14): Intramolecular Gold(III) catalyzed Diels-Alder reaction of 1-(2-furyl)-hex-1-en-5-yn-3-ol derivatives: A short and generalized route for the synthesis of polynuclear aromatic hydroxyl compounds K. Samanta, **G. K. Kar**, A. K. Sarkar; *Proceedings of the International Symposium on Frontiers of Functional Materials*, **2009** (January 06-07), page no. 42, Department of Chemistry, Univ. of Calcutta, Kolkata, India.

6. (Poster Presentation/ Poster no P-38): Design and synthesis of novel γ -lactam derivatives as possible antibacterial agents. P. Patra, A. Sarkar, **G. K. Kar**; *Proceedings of the International Symposium on Frontiers of Functional Materials*, **2009** (January 06-07), page no. 66, Department of Chemistry, Univ. of Calcutta, Kolkata, India.

7. (Poster presentation/Poster no -12): A new general synthesis of pyrrolo[3,2-b]indole. M. Rakshit, **G. K. Kar**, T. N. Kundu, M. Chakraborty; *Proceedings of the International Symposium on "Recent Trends of Rresearch in Chemistry (RTRC-2011)"*, **2011** (Oct 31-Nov 01), page 28, Department of Chemistry, Midnapore College, Midnapore 721101, W. B. India

8. (Poster presentation/Poster no -12): Search for novel monocyclic γ -lactam derivatives as possible antibacterial agents: Studies on the Suzuki reaction in N-aryl part of the structurally designed

monocyclic γ -lactam carboxylic acid derivatives . P. Patra, G. K. Kar,; *Proceedings of the International Symposium on (ISMOC 2013)*, **2013** (Feb.6-8, 2013), page 28, Department of Chemistry, Calcutta University, Kolkata, W. B. India

B) National Conference/Symposium:

1. Synthesis of acenaphtho[1,2-b]quinolines. J. K. Ray, **G. K. Kar**, B. G. Chatterjee; *Proceedings of the 71st Session of Indian Science Congress*, **1984** (January), page no. 70, B.I.T. Meshra, Ranchi.
2. Synthesis of acenaphtho[1,2-b]benzo[d]thiophene. J. K. ray, **G. K. Kar**, B. G. Chatterjee; *Proceedings of the 4th Annual Conference of Indian Council of Chemists*, **1985**, page no. 19, Gorakhpur,
3. Mass spectral studies on some substituted β -lactams. **G. K. Kar**, B. G. Chatterjee, J. K. Ray; *Proceedings of the 3rd National Symposium on Mass Spectrometry Research --- Application and Instrumentation*, **1985** (September), Page no. C-19/1, R. R. L. Hyderabad.
4. Synthetic studies towards dihydrodiols of benz[c]acridine and acenaphthoquinolines as potential proximate carcinogens. J. K. Ray, **G. K. Kar**, B. G. Chatterjee; *Proceedings of the 72nd Session of Indian Science Congress*, **1985** (January), page no. 120, Lucknow.
5. Synthesis of dioxodihydrobenz[c]acridines. J. K. Ray, **G. K. Kar**, B. G. Chatterjee; *Proceedings of the National symposium on Recent Advances in Organic Chemistry*, **1985**, page no. O-16, University of Kalyani, Kalyani.
6. Synthesis of γ -lactam derivatives related to azasteroid. J. K. Ray, **G. K. Kar**, B. G. Chatterjee; *Proceedings of the 73rd Session of Indian Science Congress*, **1986** (January), page no. 128, New Delhi.
7. Studies on new β -lactams: Synthesis of 3-oxacepham derivatives. **G. K. Kar**, B. G. Chatterjee, J. K. Ray; *Proceedings of the 2nd National Symposium on Recent Advances in Organic Chemistry*, **1986**, paper no. O-1, University of Kalyani, Kalyani.
8. Studies on γ -lactams: Synthesis of 9-aryl-9-aza-3,8-dioxo-4,5-benzobicyclo[4,3,0]nonane. **G. K. Kar**, B. G. Chatterjee, J. K. Ray; *Recent Trends in Heterocyclic Chemistry*, **1986** (October), paper no. O-2 (page no. 200, Banaras Hindu University, Varanasi.
9. Studies on new β -lactams: Synthesis of 3-oxacepham derivatives. **G. K. Kar**, B. G. Chatterjee, J. K. Ray; *Proceedings of the 7th Annual Conference of Indian Council of Chemists*, **1987**, paper no. O-22, Jiwaji University, Gwalior.
10. Short synthesis of dibenzacridines by thermolysis of chlorovinyl imines. **G. K. Kar**, Md. I. Sami, A. C. Karmakar, J. K. Ray; *Proceedings of the 27th Annual Convention of Chemists*, **1990** (December), paper no. ORG(AW)-11, Magadh University, Bodhgaya.[The paper was awarded with Convention Award (Indian Chemical Society,1991, 44th Annual Convention of Chemist /Indian Chemical Society)
11. Synthetic studies on polycyclic aryl γ -lactams. G. K. Kar, I. Sami, J. K. Ray; *Proceedings of the 7th National Symposium on Recent Advances in Organic Chemistry*, **1991**, paper no. O-2, University of Kalyani, Kalyani.
12. Structurally designed novel γ -lactams as inhibitor for bacterial propagations. J. K. Ray, I. Sami, **G. K. Kar**, B. C. Roy, N. K. Brahma; *Proceedings of the 4th National SymposiumTrust (NOST)*

Conference, **1994** (March), Paper no.-, Dehradun, U.P.

13. Cavity shaped azaarenes: Synthesis of a novel nonacyclic diazaarene 4-phenanthridino[3,2-a]-4-phenanthridino[2,3-j]anthracene. M. K. Halder, **G. K. Kar**, J. K. Ray; *Proceedings of the 32nd Annual Convention of Chemists*, **1995**, paper no. OS(AP)-6, Jaipur. [The paper was awarded with Convention Award (Indian Chemical Society): 1995 (49th Annual Convention of Chemist /Indian Chemical Society)

14. Studies on novel cavity shaped receptors: Synthesis of some bis thiophene-5-carboxamide derivatives with diphenyl ether spacer. S. Gupta, **G. K. Kar**, J. K. Ray; *Proceedings of the 35th Annual Convention of Chemists*, **1998**, paper no.-, Dharwad, Karnatak.. [The paper was awarded with Convention Award (Indian Chemical Society): 1999 (52nd Annual Convention of Chemist /Indian Chemical Society)

15. Studies on the synthesis of trans dihydrodiols of polycyclic aromatic thiaarenes as potential proximate metabolites: First total synthesis of *trans* 10,11-dihydroxy-10,11-dihydroacenaphtho[1,2-b]- benzo[d]thiophene and 6,7-dihydroxy-6,7-dihydronaphtho[1,2-b]thiophene J. K. Ray, S. Gupta, **G. K. Kar**; *Proceedings on the Symposium on Emerging Trends in Organic Chemistry*, **2000** (January 13-14), IACS, Kolkata (Organized as part of Golden Jubilee Celebration of IACS)

16. A high yielding general method for the synthesis of β -furyl- α,β -unsaturated aldehydes through Suzuki Reaction. K. Samanta, **G. K. Kar**, A. K. Sarkar; *Proceedings of the 2nd Symposium on Acharya Prafulla Chandra Ray and Chemistry Today*, **2007** (August 2-3), Indian Chemical Society, University College of Science and Technology, Kolkata. [The paper was awarded with the Young Scientist Award (awarded to K. Samanta) by Indian Chemical Society].

17. Thermolysis of N-aryl enaminoimine hydrochloride derivatives: a short and general method for the synthesis of pyridocoumarins. P. Patra, **G. K. Kar**, B. Khatua; ; *Proceedings of the 44th Annual Convention of Chemists*, **2007** (December), paper no. ORG(AP)-10, page C3. Mahatma Gandhi Institute of Applied Sciences, Jaipur. [The paper was awarded with Prof. P. Sengupta Memorial Award (Young Scientist Award /awarded to P. Patra)) by Indian Chemical Society].

18. Studies on polynuclear furoquinones: Synthesis of tri- and tetracyclic furoquinones simulating BCD/ABCD ring of Tanshinone-I. F. H. Shaik, **G. K. Kar**; *Proceedings of the 3rd Symposium on Acharya Prafulla Chandra Ray and Chemistry Today*, **2008**. (August 1-2), Indian Chemical Society, University College of Science and Technology, Kolkata. [The paper was awarded with the Young Scientist Award (awarded to F. H. Shaik) by Indian Chemical Society].

19. A Journey towards the synthesis of Chrysen-6-ol and Benz[c]phenanthren-5-ol: Usual and unusual observations. K. Samanta, **G. K. Kar**, A. K. Sarkar; *Proceedings of the 4th Symposium on Acharya Prafulla Chandra Ray and Chemistry Today*, **2009**. (August 1-2), Indian Chemical Society, University College of Science and Technology, Kolkata.

20. Synthesis of some angularly fused novel "U" Shaped tetracyclic furoquinones simulating ABCD rings of Isotanshinone-II. Khokan Samanta, **G. K. Kar**; *Proceedings of the National conference in Chemical Science-(FICS)-2012* (December 2-4)), Indian Institute of Technology, Guwahati, Guwahati, Assam.

Details of Research Projects Completed (at Presidency College):

1. CSIR Project (as P.I): Title: "Studies on the Intramolecular dienyne cyclization and olefin metathesis for the synthesis of Ricciocarpin, Tanshinone and other furosesquiterpenes" (project no:

01(1976)/05/EMR-II); Amount sanctioned (3 years 6 months) : Total Rs. 946000/-

2. DST SERC Projects (as Co-I; P.I: Prof J. K. Ray, Dept of Chemistry, IIT Kharagpur; ; project in collaboration with IIT Kharagpur): Title: “Synthetic studies towards fused and bioactive γ -lactam derivatives : conversion of γ -lactam carboxylic acids to N-arylformyl pyrroles and synthesis of the Rolipram, Benzo-indolizidine and Pyrolizidines” (project no. SR/S1/OC-10/2005, dated 7 th February 2006) Total amount of the project: Rs. 2361120=00 (Sanctioned for G. K. Kar, Presidency College, Rs. 1209120/- for 3 years).

Details of ongoing Research Projects at Presidency University (w.e.f July 2012):

1. DST SERB Projects” (P.I : Dr. Gandhi K. Kar)

“Studies towards the synthesis of biologically active natural and non-natural furoquinones, furo -macrolides and their thiophene analogs (Project started w.e.f July 20, 2012; Amount sanctioned Rs. 2300000/- for 3 years)

Signature

(Dr. Gandhi Kumar Kar)