:Curriculam Vitae:
Prof. Gandhi Kumar Kar, Department of Chemistry, Presidency University, Kolkata 700073, India

1. Name: DR. GANDHI KUMAR KAR
Designation: Professor of Chemistry
(Ex. Head of the Department of Chemistry and Ex. Dean of Faculty of Natural & Mathematical Sciences),
Department of Chemistry, Presidency University, Kolkata 700073, India

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Address (Office): Department of Chemistry,
Presidency University, 86/1 College Street, Kolkta-700073, India.

Date of birth: January 01, 1958
Father's Name: Late Karali Kumar Kar
Nationality: Indian. **Sex:** Male. **Marital Status:** Married

2. **Educational Attainments** (Degree / Year / Board or University / Class or Div./Remarks)**:**
i. School Final (1973) / W. B. S. E / 1st Div. / **Rank 25 th** (in the Board, West Bengal).
ii. Univ. Entrance (1974) / Burdwan University / 1st Div.
iii. B. Sc. (Chem. Hons) (1977) / Burdwan University / 1st Class / **Rank 4 th** (in the University).
iv. M. Sc (Chemistry / Organic Special) (1980)* / I. I.T, Kharagpur /1st class (equiv.),**/ **Rank 3rd** at IIT KGP
v. Ph. D (Synthetic Organic Chemistry)*** (1986) / I. I. T, Kharagpur (Worked with CSIR individual fellowship)
[*Result of B.Sc Hons of 1977 was published in 1978 and was admitted in M. Sc course in 1978-80 sessions. ** As per senate decision no class / division is awarded in M. Sc level.
*******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**)]**.

3. **Awards and Distinctions**:
(i) **Siksha Ratna 2016** (Higher Education Department, Govt. of W.B)
(ii) **Best Teacher of Presidency University 2016** (Presidency University, Kolkata
(iii) **National Scholarship** (1973-1977).
(iv) M.C.M Scholarship (IIT KGP) 1978-1980.
(v) **CSIR fellowship** (individual) (JRF: 1981-1983 and SRF: 1983-1986).
(vi**) Convention Award** (Indian Chemical Society): **1991** (*Annual Convention of Chemist /Indian Chemical Society*).
(vii) Co Author of the papers awarded with **Best Paper Awards**: Indian Chemical Society (Annual Convention of Chemists, Organic Chemistry Section) **1991**, **1995**, and **1999**.

(viii) Co-author of the papers awarded with best paper award (**Dr. B. N. Mankad award, Awarded to my student Dr. P. Patra**): **2007** (*Annual Convention of Chemist /Indian Chemical Society*).
(ix) Co-author of the paper awarded with **Young Scientist award awarded to my Ph.D student Moumita Rakshit** by Indian Chemical Society in "*National Symposium on Recent Advances in Chemistry and Industry* (**2014**)."

4. A brief biographical account of Prof. Gandhi K. Kar:

Prof Gandhi Kumar Kar) popularly known as **GKK Sir** or **Gandhi Sir** to his students is currently working as **Professor of Chemistry** in the Department of Chemistry, Presidency University, Kolkata. Prof. Kar was **Ex. Dean of Faculty of Natural and Mathematical Sciences** at Presidency University, Kolkata (2015-16) and also acted as **Head of the Department** (two terms 2012-2015 and 2018-2020, Department of Chemistry, Presidency University, Kolkata.

Recently he has been honoured by Higher Education Department, Govt. of West Bengal with the award "**Siksha Ratna 2016.**" Prof. Kar has also been awarded with the "**Best Teacher of Presidency University 2016.**"

Prof. Kar, a **National Scholar** and completed his B.Sc (Chem Hons) Degree from Bankura Christian College (Under Burdwan University) and M.Sc (Chemistry) Degree from I.I.T Kharagpur. Prof Kar also completed his Ph.D Degree (with CSIR individual fellowship) from I.I.T Kharagpur in 1986 under the joint supervision of Prof. B.G. Chatterjee and Prof. J. K. Ray.
In 1986, he Joined W.B.E.S as lecturer in Chemistry (**Stood first in the PSC Pannel**) and then Served at different Govt Colleges like Maulana Azad College, Kolkata (under C.U) (1986-1990; as Lecturer, W.B.E.S), Jhargram Raj College (under V.U) (1990-2002; as Asst. Professor and Reader, W.B.E.S), Presidency College, Kolkata (under C.U) (2002-2010; as Reader and Associate Professor, W.B.E.S), Presidency University, Kolkata (2010-July 19, 2012; as Associate Professor, W.B.E.S). Presidency University, Kolkata (July 20, 2012 to till date; as Professor of Chemistry).
Prof Kar spent a major part of his career at **Jhargram Raj College; a Govt. College** situated at Jhargram, a very **rural and tribal area** of West Midnapore. From Jhargram Raj College a large number of students graduated with Chemistry Hons under the teaching of him and got settled in life with prestigious jobs. An effort of opening the M.Sc course in Chemistry, at Jhargram Raj College was initiated by Prof Kar and other teachers of the department in 1995 and as a result of it M.Sc program was started at Jhargram raj College at a later stage. During his stay at Jhargram Raj College, he was selected as **Member of Board of Studies** (in two terms) in Chemistry at **Vidyasagar University** and actively took part in upgrading the syllabus etc. Prof. Kar also acted as a member of **PG Board of Studies of Lady Brabourne College**, under Calcutta University. He was also a member of the **Doctoral Committee** in Chemistry at **I.I.E.S.T,** Shibpur, Howrah. Currently he is acting as a member of **Doctoral Committee** in chemistry of few students working under Dr. Chinmoy Chowdhury, **I. I. C.B,** Jadavpur, Kolkata
Prof Gandhi K. Kar served for a long period under W.B.E.S, a transferable service. As a result he was having limited scope to set up his own laboratory (as in most of the Govt Colleges there was no infrastructure for research work at all) before his posting at Presidency College in 2002. **Prof. Kar devoted his leisure hours in collaborative work with Prof J. K. Ray at I.I.T Kharagpur** and it resulted in many good publications in almost each and

every year in his career. He has so far **published 61 papers** in peer reviewed International and National journals.

When Prof. Kar got the posting at Presidency College in 2002, for the first time he got a platform to set up a research laboratory of his own. At that time there was no research laboratory in organic chemistry at Presidency College. In his own effort Prof. Kar got two major projects from CSIR and DST to set up a new research laboratory at Presidency College in 2005 and started work. **Unfortunately the laboratory was gutted completely in 2010 in an accident of fire (probably due to electrical short circuit in midnight of 30th October 2010)**. This was a major setback for him. But without being disheartened, Prof Kar got another major project from DST-SERB and again set up the laboratory in 2012 to complete **Ph.D of 4 students** (till date) working under his supervision. At Presidency University, there was no NMR, IR or Mass spectral facilities even then Prof. Kar was able to produce **4 Ph.D students** and **32 M.Sc dissertations**.

As a teacher of Presidency College, Presidency University and other colleges Prof Kar have successfully produced many students who later on qualified in NET (more than 110 PG students from Presidency College have qualified in NET, GATE in last 11 years). A major section of the SPM fellows (CSIR) in chemical sciences in last 12 years are the either UG Chem Hons (who later on joined different IITs / IISc / TIFR for their Master / Int PhD degree) or PG Chemistry students of Presidency College and are his students.

In last 13-14 years the UG Chem Hons students of Presidency College & Presidency University have performed brilliantly in the all India JAM examinations, IISc, TIFR, IISER, IACS and other all India admission tests. On an average 20-25 UG Chem Hons students joined IIT M.Sc courses in every year through JAM with very good ranks. The B.Sc Biochemistry Hons course at Presidency College was started in 2007 as a joint effort of the teachers of Presidency College which ran successfully and later on merged into newly created Department of Life Science at Presidency University. Large number students who completed their B.Sc Biochem Hons at Presidency College are now carrying out their Ph.D in USA, NUS Singapore, IISc, NCBS, NCL Pune, IISER Pune etc. Prof. Kar feels him proud to be one of the leading teachers of these students

Prof. Kar not only helped the students through class teaching only but also by standing by the side of them in their tough time. He has personally taken many initiatives to arrange scholarship from Sheela Kanoria Foundation to help for poor and needy girl students of UG and PG section. At least 35-40 girl students have been benefited in last 10-12 years due to his effort. He personally helped lot of his students for their placement at TCG Life Sciences-Chembiotek, Dr. Reddy's lab, Sunmer, Mylan group Company, Chemgen Pharma, BSA-Mumbai etc.

As **first H.O.D** of Chemistry Department, **Presidency University**, it was Prof. Kar's first challenge and duty to **obtain DST-FIST fund of 2.25 crores** for Chemistry Department. He successfully defended the DST-FIST proposal in 2013 to obtain grant of Rs. 2.25 crore for the Chemistry Department. A **NMR-spectrometer)** (400 MHz), FT IR spectrometer, Computation lab etc were the prime items sanctioned under the scheme. In 200 years of history, Presidency University received the first NMR spectrometer and Prof. Kar took the leading role to obtain it through DST-FIST grant. The NMR spectrometer has already been installed in January 2018. Major upgradations of old UG,PG and Research labs were taken up during the tenure of Headship of Prof. Kar

The old syllabi of UG and PG courses in chemistry were revised to update in 2014 under the headship of Prof. Kar. He took a major initiative to draw the kind attention of higher authority to start **students' feedback program** at Presidency University. The students have

already started giving their confidential feedbacks in last 3-4 years in which a part is the evaluation of the teaching of respective teachers.

As **Dean of Faculty of Natural and Mathematical Sciences**, Prof Kar for the first time initiated the registration a large number of Research Scholars in Ph.D program of Presidency University.
In **2016 Prof. Kar** has been **honoured with the "Sikshaa Ratna"** award of **Govt. of West Bengal** for his contribution as a teacher in higher education**.** In **2016, Prof. Kar** also **received the first "Best teacher" award** from Presidency University for his contribution as an outstanding teacher**.** Incidentally he is the only recipient of such award in last 20 years or more.

5. **List of current positions of few former students (as representatives) of Prof. Gandhi Kumar Kar**

i) **Dr. Bhanu Bhusan Khatua**, Asst. Professor, Materials Science Centre (Polymer Division), I.I.T. Kharagpur, Kharagpur-721302, W.B; Ph.No.: +91 3222282982; e.mail: khatuabb@matsc.iitkgp.ernet.in (UG Chem Hons student at Jhargram Raj College).

ii) **Dr. Dipankar Srimani**, Asst. Professor, Department of Chemistry (Room No. CHEF 203), I.I.T. Guwahati, Guwahati 781039, Assam. Ph. No.: +91-361-2583312; E.Mail: dsrimani@iitg.ernet.in; (PG Chemistry student at Presidency College).

iii) **Dr. Arnab Dutta**, Associate. Professor, Department of Chemistry, I. I.T Bombay, Powai, Mumbai 400 076, Maharashtra, e.mail: arnabdutta@chem.iitb.ac.in (UG Chem Hons student at Presidency College).

iv) **Dr. Kalyan Sadhukhan**, Associate. Professor, Department of Chemistry, IIT Roorkee; sadhu@cy.iitr.ac.in (PG Chemistry student at Presidency College)

v) **Dr. Suvankar Dasgupta**, Asst. professor, Department of Chemistry, National Institute of Technology (NIT), Patna, Patna University Campus, Patna-800005, Bihar;
E. Mail: suvankar@nitp.ac.in (UG Chem Hons Student at Presidency College)

vi) **Dr. Rima Lahiri** Asst. professor, Department of Chemistry, National Institute of Technology (NIT), Patna, Patna University Campus, Patna-800005, Bihar; (UG Chem Hons Student at Presidency College)

vii) **Dr. Arijit Sengupta**, Scientific officer-E, Bhaba Atomic Research Centre (BARC) (Radiochemistry Division), Trombay, Mumbai 400084; Ph. No.: 022 25594090; Mob. No.: 09769542187; E.Mail: arijitbarc@gmail.com; arijita@barc.gov.in (PG Chemistry student at Presidency College)

viii) **Dr. Khokan Samanta,** Asst professor (W.B.E.S), Department of Chemistry, Haldia Govt. College, Debbhog, Haldia 721657, W.B; phone No. +91 9775550369; E.Mail: samantakhokan16@gmail.com (Ph.D student under Prof. Kar's supervision at Presidency college)

ix) **Dr Prasanta Patra**, Asst professor (W.B.E.S), Department of Chemistry, jhargram Raj College, Jhargram Midnapore, W.B; phone No. +91 9775550369; (Ph.D student under Prof. Kar's supervision at Presidency college)

x) **Dr. Maumita Rakshit**, Scientific Officer at TCG Life Science-Chembiotek, Kolkata (M.Sc Chemistry and PhD Student under Prof. Kar's supervision at Presidency College)

xi) **Dr. Sajal Das**, Asst Professor of Chemistry, Drepartment of Chenmistry, Tezpur University, Tezpur, Assam (UG Chem Hons student at Jhargram Raj college, Jhargram, Midnapore)

xii) **Dr. Ramkrishna De**, Research Chemist, Natural Product Analytics Group, Bloomington, USA (UG Chem Hons Students at Jhargram Raj College, Midnapore)

xiii) **Dr. Asit B. Panda**, Senior Scientist, Inorganic Materials and Catalyst Division, CSIR-Central Salt and marine Chemical Research Institute, Bhabnagar 364002, Gujrath (UG Chemistry hons Student at Jhargram Raj College, Jhargram, Midnapore)

xiv) **Miss Adwitiya Kar** Scientific officer-D, Bhaba Atomic Research Center, Presently posted at India Gandhi Centre for Atomic Research (IGCAR)-BARC facilities, Kalpakkam, Tamilnadu (B.Sc Chem Hons Student of Prof. Kar at Presidency College)

xv) **Dr. Paulami Samai**, Scientist, Regeneron Pharmaceutical Inc. greater New York City Area, USA (UG Chem Hons Student at Presidency College)

xvi) **Dr. Sukalyan Bhadra**, DST –INSPIRE Faculty, Inorganic Materials and Catalyst Division, CSIR-Central Salt and marine Chemical Research Institute, Bhabnagar 364002, Gujrath (PG Chemistry Student at Presidency College 2005-2007)

xvii) **Dr. Sandipan Halder**, Asst.Professor, NIT Nagpur, Applied Chemistry Division, (PG Student at Presidency College)

xviii) **Dr. Debajyoti Saha**, Asst. Professor (WBES) Krishnanagar Govt. College, Krisnanagar, Nadia.(UG Chem Hons Student at Presidency College)

xiv) **Ananya Chakrabarty** , Scientific Officer, BARC (just joined) (B.Sc Chem Hons from Presidency University)

xv) **Soumen Sarkar** (M.Sc from Presidency Univ.), **Moumita Chakraborty** (B.Sc from Presidency Univ), **Binita Mandal** (B.Sc from Presidency Univ), **Srijana Barui** (B.Sc from Presidency Univ) all are **students of GKK** & joined scientific officer/chemist position in ONGC in recent times

[A large number of UG Chem Hons students of Prof. Kar from Presidency College and Presidency University are working as Post-Doctoral Fellow / PhD Students at Premier Institutes of USA, UK, Germany such as Cal Tech, Harvard University, Cornel University, Rockefeller University, Boston College of Chemistry, Oxford University, Max Planck University, California Institute of Technology, Princeton University, Purdue University, Texas A & M university, Arizona State University etc. as well as in Premier Indian Institutes like IITs, IACS, IICB Kolkata, IISERs, NCBS, TIFR etc]

[Prof. Gandhi K. Kar has so far **successfully produced more than 1100 UG (Chem Hons) and 750 PG (Chemistry) students in the career**. In last 10 years almost every year one or more UG Chem Hons student taught by him at Presidency College have been awarded with SPM fellowship in Chemical Sciences by CSIR]

6. **Administrative experiences:** i) Dean of Science (September 2015-16)
ii) **Head of the Department** of Chemistry, Presidency University (September 2012 to October 2015 & June 2018 July-2020 November).

7. **Teaching experience: U.G**. / Chem Hons: ~36+ years; **P.G**./ Organic Chemistry: ~20+ years
[Joined W.B.E.S as lecturer in chemistry in 1986 (**Stood 1st in the Public Service Commission (PSC), W.B., Panel**). Served at **Maulana Azad College**, Kolkata (under C.U) (1986-1990; as Lecturer, W.B.E.S), **Jhargram Raj College**, West Midnapore (under V.U) (1990-2002; as Asst. Professor and Reader, W.B.E.S), **Presidency College**, Kolkata (under C.U) (2002-2010; as Reader and Associate Professor, W.B.E.S), Presidency University, Kolkata (2010-July 19, 2012; as Associate Professor, W.B.E.S). **Presidency University**, Kolkata (July 20, 2012 to till date; as Professor of Chemistry) [W.B.E.S = West Bengal Educational Service]
Courses Teaching / taught:
UG [Chem Hons & Biochem Hons (in earstwhile Presidency College)]: (Theory) Streochemistry of organic compounds, General treatment and investigation of reaction mechanism, Substitution reactions, Rearrangements, Addition reaction (to C=O and C=C), Organometalic Chemistry, Enolate Chemistry, Carbohydrates,Lipids, Heterocyclic Chemistry, Lipids; **(Practical):** Qualitative analysis of an organic sample, Preparation (one step), Preparation (two step), Chromatographic separation (Paper chromatography and TLC), Interpretation of spectra (IR/NMR), Quantitative estimation
UG B.Sc Hons (Life Science major): Stereochemistry

PG-I (Chemistry): (Theory) Mass spectrometry (Basic principles of EI, Fragmentation of small molecules) IR and 1H-NMR spectroscopy, 13C-NMR (Elementary idea), Natural products (alkaloids, terpenoids etc), Streochemistry. **(Practical):** Qualitative analysis of binary mixture organic samples (Solid-solid, solid-liquid, liquid-liquid)
PG-II (Chemistry): (Theory) Medicinal Chemistry, Total synthesis of complex organic molecules, Organic free radical Chemistry.
(Practical) Preparation (multistep), Extraction and purification of natural products, Spectroscopic analysis, Project work.
Research experience: ~36 years
Field of research: Synthetic Organic Chemistry [Our group is working on the synthesis of various interesting compounds of natural and non-natural origin. Suitable β-bromo-α,β-unsaturated aldehydes are mainly used as building blocks to synthesize: i) Natural furoterpenoids, furoquinone diterpenoids and analogs. ii) Polycyclic aza/thia-arenes as well as their oxidative metabolites as potential proximate carcinogens. ii) Condensed heterocylces like pyrroloindoles, Pyrroloindazoles, pyridocarbazoles which display versatile biological activities and iii) development of novel β- and ϒ-lactam derivatives in search of novel antibacterial agents].

8. **Total Number of Publications in International and National Journals**: **61**

List of publications (in peer reviewed International and National journals):

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); (5 year impact factor: 1.058).

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); (impact factor: 3.219).

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); (5 year impact factor: 0.751).

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. (Impact factor: 0.562).

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); (impact factor: 4.219).

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); (impact factor: 2.660).

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); (5 year impact factor: 0.751).

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); (impact factor: 4.219).

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); (impact factor: 1.009).

10. Efficient synthesis of 5-desmethyl-6-demethyliso- ellipticine and utilization of the methology 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); (impact factor: 2.194).

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); (impact factor: 3.219).

12. Regioselective thermal cyclisation of N-aryl-4-chloro1-aza-1,3-butadine 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. (Impact factor: 1.460).

13. A 'One flask' synthesis of 8,9,10,11-tetrahydrobenz[a] and 8,9,10,11-tetrahydrobenz[c]-acridine. M. K. Haldar, Gandhi K. Kar, J. K. Ray; **J. Chem. Research(S), 1993**, 46. (5 year impact factor 0.64).

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); (5 year impact factor: 1.058).

15. Assessment of mutagenic activity of someacenaphtho[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); (impact factor: 3.741).

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); (5 year impact factor: 1.058).

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); (5 year impact factor 3.046).

18. Regioselective thermal cyclisation of 3-substituted arylenaminoimine 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); (impact factor 1.165).

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); (impact factor: 0.782).

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); (impact factor: 4.219).

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. Haldar; **Synthetic Communications, 1996**, 26(21), 3959-3965. (d.o.i:10.1080/ 00397919608003818); (5 year impact factor: 1.058).

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); (impact factor: 3.219).

23. (a) Studies on gamma lactams: Synthesis of 3-aryl-1,3a,4,9b-tetrahydrobenzo[e]indole-2,5-dione derivatives and it's 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 it's 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. (DOI: 10.1039/A602882) (5 year impact factor: 0.64).

24. Studies on furoterpenes: Stereoselective total synthesis of (±) 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); (impact factor: 3.219).

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 diaazarene. M. K. Haldar, Gandhi K. Kar, J. K. Ray; **Synlett, 1997**, 9, 1057-1058. (d.o.i: 10.1055/s-1997-1534); (impact factor: 2.718).

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); (5 year impact factor 3.046).

27. Studies on cavity shaped polycyclic thiaarenes: Short and efficient synthesis of 2,12-didemethylanthra[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) (impact factor: 0.384).

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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); (impact factor: 2.194).

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Kar; **Tetrahedron, 2001**, 57(33), 7213-7219. (d.o.i:10.1016/S0040-4020(01)00676-7); (impact factor: 3.219).

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**, 1ssue-19, 2470-2475. (d.o.i: 10.1039/b102750f); (impact factor: 2.194).

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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); (impact factor: 2.660).

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(DOI: https://doi.org/10.1016/j.bmc.2021.116112) (Impact factor 3.614)

60. An expedite synthesis of some angularly fused novel 'U'-shaped tetracyclic furophenanthraquinones simulating ABCD rings of Isotanshinone-II. Khokan Samanta, Aparna Sarkar, Achintya K. Sarkar, Gandhi K. Kar; **ChemistrySelect 2021**, 6(24), 6006-6010 (DOI: https://doi.org/10.1002/slct.202100979) (Impact Factor: 2.307)

61. Diverse synthesis of pyrrolo/indolo[3,2-c]coumarins as isolamellarin-A scaffolds: a brief update. Khokan Samanta, Prasanta Patra, Gandhi Kumar Kar, Shaishab Kumar Dinda and Dibyendu Shekhar Mahantye. **New J. Chem. 2021**, 45, 7450-7485 (DOI: 10.1039/d0nj06267g) (impact factor 3.591)

9. **Posters/Oral presented in National / International Symposium:**

A) International Conferences / Symposia.

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 Fromtiers 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 Fromtiers 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 derivativesas 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

10. (Poster presentation/Poster no-015): Nuclear modification of "A-ring" of the core nucleus of isotanshinone-II in search for novel antibacterials: Synthesis of doubly condensed naphthoquinone derivative 9-methylnaphtho[1,2-b]thieno[7,8-]furan 4,5-dione and it's analog as bioisoster. Aparna Sarkar, Debjani Maiti, Gandhi K. Kar,; *Proceedings of the International Conference on Chemistry for Human Development (ICCHD 2018),* 2018 (Jan. 8-10, 2018),

page 83, Organised by Calcutta University and Heritage Institute of Technology, Kolkata, W. B. India

11. (Oral presentation By Tuyan Biswas) Luminescence modulation of a synthesised furophenanthraquinone derivative in different solvents as a result of specific solvent interaction; Tuyan Biswas, Arnab Halder, Gandhi K. Kar; *International Conference on Chemistry for Human Development (ICCHD-2020)* at Heritage Institute of Technology, Kolkata on 9 th to 11 th January, 2020.

12. (Oral presentation by Tuyan Biswas) The study of photophysical processes in the macromolecular environment; Tuyan Biswas, Arnab Halder, Gandhi K. Kar; *International Conference on Chemical and environmental sciences (ICCAES 2020) IEM, Kolkata* on 18 th to 20th December, 2020

B) National Conferences / Symposia.

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. Chetterjee, 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, Gowalior.

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. Haldar, 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 Imerging Trends in Organic Chemistry*, 2000 (January 13-14), IACS, Kolkata (Organized as part of Golden Jublee 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. Patara, 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.

21. Application of tandem Sonogashira-CuAAC reactions for the synthesis of a series of novel annulated 1,2,3-triazoles. M. Rakshit, G. K. Kar, M. Chakrabarty*; Proceedings of the National Symposium on Recent Advances in Chemistry and Industry (2014); Contributory paper (Award)- 22, Page-51; Indian Chemical Society.* (The paper was awarded with "Young Scientist Award" awarded to Moumita Rakshit).

22. β-Bromo-α,β-unsaturated aldehydes as building blocks for furonatural products and analogs : Synthesis of Pleraplysillin-I and tetracyclic furoquinones simulating ABCD rings of Tanshinone-I and Isotanshinone-II; Invited talk at the *National Seminar on "Current trends in Synthetic Organic Chemistry,"* Department of Chemistry, I. I. T. Kharagpur, January 13, 2015

23. Model studies towards the synthesis of Isotanshinone-II: General method for synthesis of some angularly fused novel "U" Shaped furoquinones simulating ABCD rings of Isotanshinone-II. (Contributory paper presented by Aparna Sarkar) Aparna Sarkar, Rumpa Das, Khokan Samanta, Gandhi K. Kar; *Proceedings of the National Symposium on Recent Advances in Chemistry and Industry (2015);* Indian Chemical Society, Calcutta University, Kolkata

24. β-Bromo-α,β-unsaturated aldehydes: Versatile building blocks for condensed phenanthraquinones simulating ABCD rings of Tanshinone-I and Isotanshinone-II. G. K. Kar. Invited talk in National Seminar on "Frontiers in Chemistry 2017", Department of Chemistry, North Bengal University, Darjeeling on Feb. 20-21, 2017

25. An approach towards the synthesis of phenanthro[4,3-b]thiophen-4,5-dione derivatives as thiophen analogue of core nucleus of isotanshinone-II isolated from Salvia species; Aparna Sarkar, Gandhi K. Kar. Oral presentation by Aparna Sarkar in *"National Symposium on contribution of Women in Science in India (NSCWSI 2018)"*, organized by Indian Science News Association (ISNA) at Calcutta University, Feb. 15-16, 2018

26. Synthesis, Characterization and Photoluminescence studies of 8-methyl 2H-thieno [2,3-H]chromen-2-one and derivatives as thiophene analogue of Angelicin derivative. Soumili

Roy, Tuyan Biswas, Arnab Halder, Gandhi K. Kar; Poster presented jointly by Soumili & Tuyan in National conference on "Current Challenges & Opportunities in Chemical Sciences (CCOCS-2019)", Department of Chemistry, Aliah University, New Town, Kolkata-700160 on 8 th August 2019 [The poster was awarded with the 3rd best poster award.]

27. (Poster) Luminescence modulation of a synthesised furophenanthraquinone derivative in different solvents as a result of specific solvent interactions" Tuyan Biswas (presented the poster), Arnab Halder, Gandhi K. Kar; 4 th Regional Science and Technology Congress (Southern region),2019 jointly organised by Department of Science & Technology and Bio-Technology,Govt. of West Bengal & Maulana Abul Kalam Azad University of Technology,West Bengal at Haringhata, Nadia on 23rd to 24th December, 2019.

10. **Details of Research Projects Completed (at Presidency College /P residency University):**

i). **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/-

ii). **DST SERC Project** (**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 7th February 2006) Total amount of the project: Rs. 2361120=00 (Sanctioned for G. K. Kar, Presidency College, Rs. 1209120/- for 3 years).

iii). **DST SERB Project** (**P.I** : Dr. Gandhi K. Kar)
"Studies towards the synthesis of biologically active natural and non-natural furoquinones, furomacrolides and their thiophene analogs" (Project started w.e.f July 20, 2012; Amount sanctioned: Rs. 2300000/- for 3 year and 2 months)

iv). **Research Project (major) submitted** as **PI** (Co-I: Dr . Arnab Halder) (to UGC; under evaluation):
"Studies on the synthesis, Characterization and spectroscopic studies on the properties of novel hetero-annulated acridine derivatives and their interaction with biomolecules" (Submitted to UGC-MRP 2014)

v) **FRPDF research grant**, Rs 3.0 lakh per year funded by Govt of W.B (till 2019

11. Number of students awarded with **Ph D Degree** under my supervision**: 04**

i. **Dr. Khokan Samanta (2012): "**Derivatives of phenanthrenes and phenanthraquinones: Synthesis via Suzuki coupling and other reactions." [Now working as Asst. Professor (W.B.E.S) at Haldia Govt. College]

ii. **Dr. Prasanta Patra (2012):** "Synthesis of Structurally Designed γ-Lactams and Other Oxa-aza Heterocyclic as Possible Antibacterial Agents." [Now working as Asst. Professor (W.B.E.S) at Jhargram Raj College]

iii. **Dr. Moumita Rakshit (2016): "**Studies on the synthesis of condensed heterocycles via alkynylation, arylation and olefination of suitable β-halo-α,β-unsaturated aldehyde intermediates." [Now working as Research Scientist at T.C.G Life Sciences: Chembiotek]

iv. **Dr. Aparna Sarkar (2019): "**Approaches towards the Synthesis of Potentially Bioactive Furophenanthraquinones Related to *Salvia* Metabolites and Their Condensed and Doubly Condensed Analogues" [Now working as Asst. Professor of Chemistry at Vivekananda Women College, Kolkata]

(Currently one PhD scholar **Smt Tuyan Biswas** is working under Prof.Kar who is Co-I of her)

12. Number of M. Sc Projects (Dissertations) supervised: 32 (since 2007)
[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 Sujuki coupling reactions of 2-bromocyclohexnal 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-Bromo phenanthro[4,3-b]thiophene-4,5-dione: a novelpolynuclear thienoquinone."

9. **Abhisek Ghatak (2011) :** "Chemoselective & regioselective Pd(II) catalyzed vinylation in C_4-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 functionalize 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 C_3-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."

16. **Saikat Mishra (2014) :** Synthesis of 3-methyl-3H-2,3,6-triazabenzo[a]cyclopenta[h]-anthracene using chlorovinyl aldehyde as an important intermediate

17. **Sourav Mal (2014) :** An approach towards the synthesis of novel non-natural tetracyclic furoquinones: Synthesis of "AB" ring precursor.

18. **Debjani Maity (2015) :** Synthesis and characterization of condensed diaza-dibenzo-thienochrysene derivatives, an octacyclic macroarene molecule.

19. **Jeet Banerjee(2015) :** A synthetic journey towards non-natural tetracyclic furoquinone Phenanthro[2,1-b]furan-10,11-dione.

20. **Neha Jha (2016) :** Studies toward the synthesis of phenantro[1,2-b]thiophene-10,11-dione as thiophene analogue of ABCD ring of Tanshinone-I

21. **Anita Haldar (2016) :** Synthesis and characterisation of condensed diaza-di-1-methyl-naphthochrysene derivative: an octacyclic macroarene molecule.

22. **Ankita Dey (2017) :** Nuclear Modification in "AD ring" of Tetracyclic Framework in Isotanshinone-II: Synthesis of Doubly Condensed Naphthoquinone: 9-Methylnaptho[1,2-b: 7, 8-b]bisthiophene-4,5-dione as an Isoster.

23. **Sabina Yashmin (2017) :** Synthesis of Novel Polycyclic Azaarenes: synthesis of 2-Methoxybenz[c]acridine derivatives as Precursor of Potential Penultimate Carcinogenic Quinone Metabolites

24. **Soumana Joarder (2017) :** Thermolysis of Anil Hydrochlorides: Synthesis of Novel 2-Methoxybenz[c]acridine Derivatives as Precursor of Penultimate Carcinogenic Quinone Metabolites.

25. **Somalika Lowha (2017) :** Synthesis of novel thieno[2,3-c]benz[h]acridine derivative as bio-isoster of dibenz[c,h]acridine analogue using thermolysis of chloro-vinylimine derivative

26. **Susmita Naskar (2018) :** An approach towards the synthesis of chiral C_2 symmetric *bis* (carbomethoxy)tetrathia[7]helicine : Synthesis of *(E)* Dimethyl 7,7'-(ethane-1,2-diyl)*bis* (benzo[1,2-b:3,4-b']dithiophene-2-carboxylate as penultimate intermediate.

27. **Roshni Dey (2018) :** Search for non β-lactam mimics of β-lactam antibiotics: Synthesis of C-3 aryl modified novel monocyclic γ-lactam derivatives.

28. **Atreyee Mukherjee (2019) :** Studies on the synthesis on the novel benzacridine derivatives: An efficient, short and high-yielding synthesis of 2-fluorobenzacridine derivatives.

29. **Soumili Roy (2019) :** Thiophene analogue of Angelicin derivative: Synthesis, characterization and photoluminescence studies of novel 8-methyl-2H-thieno[2,3-h]chromen-2-one & ethyl 8-methyl-2-oxo-2H-thieno[2,3-h]chromene-3-carboxylate

30. **Priyanka Pal (2020) :** A brief review on synthesis and pharmalogical evalution of naturally occurring condensed furophenanthraquinones related to salvia species

31. **Uttara Pal (2021) :** A Plan towards the total synthesis of Tanshinone I: Biologically important condensed Furophenanthraquinones derived from *Salvia miltiorrhiza Bunge*

32. **Subhajyoti Patra (2022) :** An Effort Towards the Synthesis of Polycyclic Thiarenes : Synthesis of the Penultimate Precursor (E)-1,2-bis(6,8-dimethylnaphtho[1,2-b]thiophen-2-yl)ethene

13. **Member of professional bodies:** (i) Indian Association for the Cultivation Sciences (Life member). ii) Indian Chemical Society.;
Formerly **Member of Governing body**: Presidency University;
Acted as **Member of Board of Studies** in Chemistry, Vidyasagar University (in two terms)
Currently member of UG & PG **Board of Studies** of Chemistry, Department of Chemistry, Presidency University, Kolkata.
Formerly Member of **Research Advisory Committee** (RAC), Department of Chemistry, Presidency University, Kolkata.
Formerly Member of **Ph.D Committee**, Department of Chemistry, Presidency University, Kolkata
Member of **Ph.D Committee**, Biotechnology Department, Institute of Health Science, New Town Campus, Presidency University, Kolkata

14. A brief note highlighting other academic activities in addition to regular duties:

i) Formerly **H.O.D Chemistry (two term)**, Presidency University, Kolkata (2012-2015) and (2018-Nov 2020).
ii) Ex. **Dean of Faculty of Natural and Mathematical Sciences**, Presidency University.
iii) Member: **NAAC Steering committee**, Presidency University, Kolkata (2015-16)
iv) Formerly Member of **Governing body**: Presidency University (2013-16).

v) Member of **Sexual harassment Cell (ICC),** PU
vi) Member of **Board of Studies** in Chemistry at Presidency University.
vii) Member of **PG Board of Studies** in Chemistry at Lady Brabourne College, Under Calcutta University
viii)Formerly Member of **Board of Studies** in Chemistry Vidyasagar University (in two terms).
ix) Currently External Member**: Ph.D Committee** (Chemistry) **I.I.E.S.T,** Shibpur, Howrah
x) Acted as **Joint Secretary** in the Organizing Committee of 23rd**West Bengal State Science & Technology Congress 2016**.
xi) Ex. Member of Advisory Committee: 24th West Bengal State Science & Technology Congress 2017
xii) Acted as a member **NAAC preparation committee of Presidency College**.
xiii) **Chairperson**: **Admission committee**, Presidency University
xiv) Ex. **Chairperson: Faculty Council** in faculty of Natural & mathematical Sciences
xv) Member**: Doctorate Committee** (Science), Presidency University, Kolkata
xvi) Member: **Ph.D Committee** (Chemistry), Presidency University
xvii) Member of **DEC**, Dept/ of Chemistry and Department of Life Science
xviii) **Reviewer**:
(a) *Chemical Review* (American Chemical Society),
(b) *Journal of Indian Chemical Society* (Indian Chemical Society),
(c) *Monatshefte fur Chemie* (Springer).
(d) Mini Reviews in Organic Chemistry (MROC) (Bentham Science)
(e) Mini Reviews in Medicinal Chemistry (MRMC) (Bentham Science)

xix) Actively took part in organizing the "**Chemiquiz**" program, an inter college chemistry quiz competition organized by the Department of Chemistry, Presidency College (now Presidency University. Prof Kar actively took part in **arranging seminars** as a part of "**Chemiquiz**" program of Chemistry Department (Few notable speaker in last two years: Prof Sankar Bhattacharya, ex.Director I.ACS, Jadavpur, Prof. J.K. Ray, Ex H.O.D, I.I.T Kharagpur, Prof. Dipak R. Mal, Ex H.O.D, I.I.T Kharagpur, Dr. Tarun K. Sarkar, Ex. Professor, I.I.T Kharagpur, Prof. Pradyot Ghosh (Bhatnagar Award Winner 2015), IACS, Kolkata, Dr. Tapan Pine, IACS, Kolkata, Prof. Subrata Majumdar, Division of Molecular Medicine, Bose Institute, Kolkata, Dr. Tapas Kar, Utah state University)
xx) Prof. Kar Actively took part in organizing **one day Seminars** at Presidency University in collaboration with Surface Chemistry Society in 2014
xxi) Arranged many **seminars** delivered by renowned Chemists in connection of Departmental seminars
xxii) Acted as a member of "**100 years CU PG teaching celebration committee**", several times arranged seminars competitions among the PG students of the colleges with PG teaching facility.
xxiv) Every year actively took part in organizing **Annual Sports** of Presidency University and erstwhile Presidency College.
xxv) Acted as a member of different committees *eg*. **Admission Committee, Election Committee, Disciplinary Committee, Finance Committee, Research Advisory Committee (RAC), Departmental Ph.D Committee**, **Endowment Committee** etc. of Presidency University.
xxiv) **All the Ph.D students (2012-2019) produced by Prof. Kar are well placed**; 2 of them are working as Asst. Professor in Govt. Colleges (W.B.E.S), 1 as Asst. Professor in govt. sponsored college under Calcutta University and 1 at TCG Life Science as Scientific officer

xxvi) Successfully **produced more than 1100 UG (Chem Hons) and 530 PG (Chemistry)** students so far in the career]

The information provided in this nomination form is true to the best of my knowledge.

Date: 1-11-2022

(Dr. Gandhi Kumar Kar)
Professor of Chemistry
Department of Chemistry,
Presidency University,
86/1 College Street Kolkata 700073, W.B, India