Dr SANKAR K. GUCHHAIT
Associate Professor
Department of Medicinal Chemistry
National Institute of Pharmaceutical Education and Research (NIPER)
S. A. S. Nagar, Punjab 160062
Email : skguchhait@niper.ac.in; Office: 0172-221-4682-87
Mobile- 9888307847
Website: http://www.niper.ac.in/index.htm

Professional experience

- January, 2012 - Present: Associate Professor, Department of Medicinal Chemistry, NIPER
- January, 2007 - January, 2012: Assistant Professor, Department of Medicinal Chemistry, NIPER

Post-Doctoral and Doctoral Research Experience, Education

- 2005-2006:, University of California, Riverside, USA; with Professor Michael C. Pirrung
- 2004-2005: University of Illinois at Chicago, USA; with Professor Gabriel Fenteany
- 2002-2004: University of Tennessee, Knoxville, USA; with Professor George W. Kabalka
- 1996-2001: Ph.D.; Indian Association for the Cultivation of Science, Kolkata; Under supervision of Professor Brindaban C. Ranu
- 1994-1996: MSc in Chemistry (Specialization in Organic Chemistry), University of Calcutta
- 1991-1994: BSc in Chemistry, University of Calcutta

Current Research Area

- Anticancer drug discovery: Design and synthesis of natural product-based heterocyclic compounds as human DNA topoisomerase II inhibitors and tubulin polymerization inhibitors (NCEs), Bio-evaluation studies, SAR studies, Lead identification and optimization
- Antileishmanial drug discovery: Design and synthesis of heterocyclic compounds as leishmanicidal agents (NCEs)
- Synthesis of heterocyclic and natural product-based compounds: Direct arene C-H bond functionalization, Isocyanide chemistry, and Multicomponent reaction (MCR)

Award/Honor:

- **Professor D. Nasipuri Memorial Award by Indian Chemical Society in 52nd Annual Convention of Chemists, Jaipur on 30.12.2015**
- Junior Research Fellowship (CSIR), Govt. of India, 1996-1998
- Senior Research Fellowship (CSIR), Govt. of India, 1998-2000
- Qualified National Eligibility Test (NET), Council of Scientific and Industrial Research (CSIR) for Lectureship and Fellowship, Govt. of India, 1995
- Qualified Graduate Aptitude Test in Engineering (GATE) for Fellowship, Govt. of India, 1996

Membership in professional organization

- Life member, Chemical Research Society of India (CRSI)
- Member, American Chemical Society

Significant research outcome and recognition

1. **Scaffold-hopping in target-based drug discovery**: We explored for the first time an important approach for exploration of drug-scaffold-hopped compounds as potent anticancer agents that can inhibit catalytic role of human DNA toposiomerase IIα (hTopoIIα). The work published in the *J. Med. Chem.* 2011, *54*, 5013-5030 was recognized as "highly cited article" (The American Chemical Society appreciated with the certificate).
2. "**Choice-based change**" approach: An unprecedented strategy for "choice-based change" in site of inhibition towards structure-based discovery of human topoisomerase IIα catalytic inhibitors has been discovered. The work published in *ACS Med. Chem. Lett.*, 2015, *6*, 481-485 was highlighted by featuring it as a cover art image in one of the issues (April, 2015) of the *ACS Med. Chem. Lett*.
3. **Discovery of potent anticancer agents**: Several classes of compounds were designed based on Natural products (NP-based/inspired), Drugs, Clinical trial agents, scaffold hopping strategy, and consideration of important pharmacophoric features. In their diversity-feasible synthesis, several arene C-H bond functionalization/arylation reactions, insertion of isocyanide, convertible isocyanide, isocyanide-equivalent, building block strategy, multicomponent reactions, and new and efficient catalysis have been explored. Several compounds as potent hTopoIIα or tubulin targeting apoptotic anticancer agents, more effective than some anticancer drugs in cell lines while less toxic to normal cells, have been discovered. Their further studies are going on.
4. **Discovery of antileishmanial agents**: Some compounds as potent antileishmanial agents, more effective than antileishmanial drugs miltefosin and pentamidine in cell line while poor cytotoxic to normal cells, were discovered.
5. **Illustration of outcome in books**: Some of works of new synthetic methods and catalysis published in the Journal of Organic Chemistry have been illustrated in books published by Wiley and Elsevier, and highlighted in organic chemistry portal website.

Research Projects

Extramural research projects (completed/running/approved)

I) DST Project (Approved)

Project Title: Switch in mode of action of Ellipticine with Etoposide-inspired structural modulation: Towards exploration of new molecular motifs as potential anticancer agents			
Funding Agency	**Budget (Rs)**	**Duration**	**Commencement of project**
DST	Approx. 50 lakhs	3 yrs	Approved. Sanction will be received soon.

II) CSIR Project (Continued)

Project Title: Natural product inspired novel heterocyclic antitubulin anticancer agents: Design, synthesis and bio-evaluation studies			
Funding Agency	**Budget (Rs)**	**Duration**	**Commencement of project**
CSIR	19.5 lakhs	3 yrs	October, 2014

III) DST Project (Completed)

Project Title: Scaffold hopping of flavonoids: Design, synthetic exploration, and studies of topoisomerase II–targeting anticancer activities			
Funding Agency	**Budget (Rs)**	**Duration**	**Commencement of project**
DST	41.62 lakhs	3 yrs	30.07.2012

IV) DST Project (completed)

Project Title: Sustainable synthesis and bio-evaluation of hetero-polycyclic compounds as topoisomerase II inhibitors			
Funding Agency	**Budget (Rs)**	**Duration**	**Commencement of project**
DST	24.46 lakhs	3 yrs	24.06.2010

V) CSIR Project (completed, with approved 6 months extension)

Project Title: The synthesis of tetracyclic indenoindoles and their structural analogs as DNA intercalator and topoisomerase II inhibitor: Organoboron compounds as requisite radical precursors in intramolecular cyclization. The project with additional budget has been approved for extension of 6 months.			
Funding Agency	**Budget (Rs)**	**Duration**	**Commencement of project**
CSIR	14.5 lakhs	3.5 yrs	11th March, 2008

VI) Fast Track DST Project (Completed)

Project Title: Development of novel reactions for preparation of imidazoles and their use in the synthesis of purines			
Funding Agency	**Budget (Rs)**	**Duration**	**Commencement of project**
DST	20 lakhs	3 yrs	Sept, 2007

N.B.: A project was submitted for DST-SwarnaJayanti Fellowship, I was selected for 2nd round of evaluation/presentation

Project Title: A new strategy for medicinal chemistry research: Rational switching mode of action of natural product drug

Institutional Research Projects

I) Target-Specific Drug Discovery Research Against Kala Azar, funded by Department of Pharmaceuticals, Ministry of Chemicals and Fertilizers, India

A collaborative project with several NIPER Faculties, Continued.

II) Institutional five years plan project

Generation of Lead molecules (Leishmania), completed.

Research Group

PhD Students

Student	Research Area
Garima Priyadarshani (2011 onwards; synopsis is over.)	Synthetic exploration of scaffold-hopped flavonoids and studies of their potential topoisomerase II-targeting anticancer activities
Neha Hura (2012 onwards)	Design, synthesis and bio-evaluation studies of Combretastatin A-4 inspired heterocyclic compounds as anti-tubulin agents
Suyog M. Amrutkar (2012 onwards)	Synthesis, bio-evaluation and physicochemical characterization of imidazopyrazine class of compounds as hTopoIIα inhibitors
Shailendra Sisodiya (2014 onwards)	Synthesis and bio-evaluation for topoisomerase inhibitory activity of ellipticine analogs
Meenu Saini (2014 onwards)	Synthesis and biological studies of pyridine N-fused triheterocyclic derivatives as potential topoisomerase II inhibitors
Preeti (2015 onwards)	Merbarone analogs as topoisomerase II inhibitors: Synthesis, bioactivity studies and physicochemical characterization

Ph.D. Students awarded the degree

4. Dr. Vikas Chaudhury

PhD Thesis title: Heterocyclic-condensed Purines: Synthesis and Bio-evaluation studies

3. Dr. Ashish Baviskar

PhD Thesis title: Synthesis, Biological Evaluation and Preformulation Studies of N-Fused Imidazole Derivatives as Topoisomerase II Inhibitors

2. Dr. Maneesh Kashyap

PhD Thesis title: Synthesis and Biological Evaluation of Indenoindolones and Their Derivatives as Topoisomerase II Inhibitors

1. Dr. Chetna Madaan

PhD Thesis title: Development and application of multicomponent reactions in synthesis of heterocyclic compounds as potential topoisomerase II inhibitors

Master Students: guided in research during 3rd and 4th Sem. – 40; **Currently guiding** – **5**

Reviewer of research articles/projects:

Journals: Journal of Medicinal Chemistry, Organic Letters, Journal of Organic Chemistry, Organic and Biomolecular Chemistry, RSC Advances, European Journal of Medicinal Chemistry, Bioorganic Medicinal Chemistry Letter, Synlett, Synthesis, Journal of Chemical Science

Projects: Several regular projects submitted to DST and CSIR.

Personal: Male, Born on 07th March, 1973 in India

Patents and publications in independent research career

Patents (in independent research career)

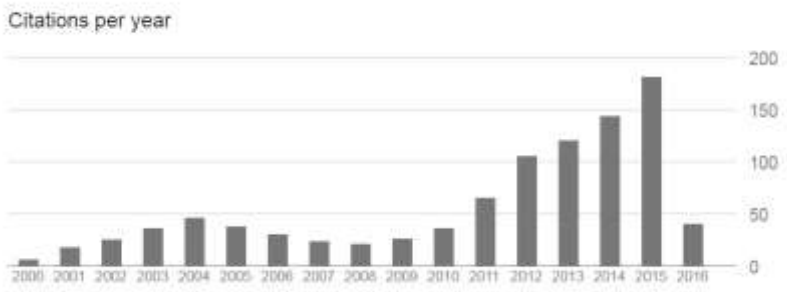
2. "Novel indolylquinoline-phenylamidine compounds as antileishmanial agents and the process of preparation thereof." **Guchhait, S. K**.; Singh, S.; Kumar, S.; Chaudhary, V.; Priyadarshani, G.; Kaur, P. K.; Dinesh, N. Application No.: 2187/DEL/2014.

1. N-Fused aminoimidazoles as novel topoisomerase IIα-targeting anticancer agents, **Sankar Kumar Guchhait**, Chanakya Nath Kundu, Uttam Chand Banerjee, Ashish Baviskar, Chetna Madaan, Amit Agarwal, Ranjan Preet, Purusottam Mohapatra. Indian patent, 2011, application no. : 91/DEL/2011.

Publications (in independent research career)

As accessed by Google Scholar on 9th May, 2016
https://scholar.google.co.in/citations?user=s0XaVfAAAAAJ&hl=en

Citation indices	All	Since 2011
Citations	1005	683
h-index	21	14
i10-index	28	20



[Publication enlisted in S.N. 40 is not as corresponding author]

42. Novel combretastatin–2-aminoimidazole analogues as potent tubulin assembly inhibitors: Exploration of unique pharmacophoric impact of bridging skeleton and aryl moiety, Vikas Chaudhary, Jubina Balan Venghateri, Hemendra Pal Singh Dhaked, Anil Shamraj Bhoyar, **Sankar K Guchhait**, Dulal Panda, *J. Med. Chem.* **2016**, Article ASAP, **DOI:** 10.1021/acs.jmedchem.6b00101.

41. Oxidative dearomatization of indoles via Pd-catalyzed C–H oxygenation: An entry to C2-quaternary indolin-3-ones; **Sankar K. Guchhait**, Vikas Chaudhary, Vijay A. Rana, Garima Priyadarshani, Somnath Kandekar, Maneesh Kashyap, *Org. Lett.* **2016**, 18, 1534-1537.

40. Identification of Leads for Antiproliferative Activity on MDA-MB-435 Human Breast Cancer Cells through Pharmacophore and CYP1A1-mediated Metabolism, Prajwal P Nandekar, Kailas Khomane, Vikas Chaudhary, Vijay P Rathod, Roshan M Borkar, Murali Mohan Bhandi, R Srinivas, Abhay T Sangamwar**,** **Sankar K Guchhait**, Arvind K Bansal, *Eur. J. Med. Chem.* **2016**, 115, 82-93.

39. Pd-Catalyzed Ag(I)-promoted C3-arylation of pyrido[1,2‑a]pyrimidin-4-ones with bromo/iodo-arenes, **Guchhait, S. K**.; Priyadarshani, G.; *J. Org. Chem.*, **2015,** *80*, 8482−8488.

38. Synthesis of 2-arylpyridopyrimidinones, 6-aryluracils and tri- and tetra-substituted conjugated alkenes via Pd-catalyzed enolic C–O bond activation-arylation, **Guchhait, S. K**.; Priyadarshani, G.; *J. Org. Chem.*, **2015**, *80***,** 6342−6349.

37. Switch in site of inhibition: a strategy for structure-based discovery of human topoisomerase IIα catalytic inhibitors, Baviskar, A. T.; Amrutkar, S. M.; Trivedi, N.; Chaudhary, V.; Nayak, A.; **Guchhait, S. K.**; Banerjee, U. C.; Bharatam, P.V.; Kundu, C. N. *ACS Med. Chem. Lett.*, **2015**, *6*, 481-485.
(This article/work was considered by the Editor, as an excellent piece of research and was highlighted by featuring it as a cover art image in one of the issues (April, 2015) of the *ACS Med. Chem. Lett*.)

36. Scaffold-hopping and hybridization based design and building block strategic synthesis of pyridine-annulated purines: discovery of novel apoptotic anticancer agents, Chaudhary, V.; Das, S.; **Guchhait, S. K.**; Kundu, C. *RSC Adv.*, **2015**, *5*, 26051-26060.

35. Desilylative activation of TMSCN in chemoselective Strecker–Ugi type reaction: functional fused imidazoles as building blocks as an entry route to annulated purines, **Guchhait, S. K.**; Chaudhary, V. *Org. Biomol. Chem.*, **2014**, *12*, 6694-6705. (Cited in ChemInform, 2015, 46, DOI: 10.1002/chin.20150603)

34. α,β-Epoxy Esters in Multiple C–O/C–N Bond-Breaking/Formation with 2-Aminopyridines; Synthesis of Biologically Relevant (Z)-2-Methylene-imidazo[1,2-a]pyridin-3-ones, **Guchhait, S. K.**; Priyadarshani, G.; Hura, N. *Synlett*, **2014**, *25*, 1692-1696.

33. Combretastatin A-4 Inspired Novel 2-Aryl-3-arylamino-imidazopyridines/pyrazines as Tubulin Polymerization Inhibitors, Antimitotic and Anticancer Agents, Sanghai, N.; Jain, V.; Preet, R.; Kandekar, S.; Das, S.; Trivedi, N.; Mohaputra, P.; Priyadarshani, G.; Kashyap, M.; Das, D.; Sathapathy, S, R.; Sidharth, S.; **Guchhait, S. K.**; Kundu. C.; Bharatam, P. V. *Med. Chem.* Commun. **2014**, *5*, 766-782.

32. One-pot preparation of isocyanides from amines and their multicomponent reactions: crucial role of dehydrating agent and base, **Guchhait, S. K.**; Priyadarshani, G.; Chaudhary, V.; Seladiya, S. R.; Shah, T. M.; Bhogayta, N. P. *RSC Adv.*, **2013**, *3*, 10867–10874.

31. "Structural Elaboration of a Natural Product: Identification of 3, 3'-Diindolylmethane Aminophosphonate and Urea Derivatives as Potent Anticancer Agents, Kandekar, S.; Preet, R.; Kashyap, M.; Kashyap, M.; Prasad, R.; Mohapatra, P.; Das, D.; Satapathy, S. R.; Sidharth, S.; Jain, V.; Choudhari, M.; Kundu, C. N.; **Guchhait, S. K.**; Bharatam, P. V. *Chem.Med.Chem*. **2013**. *11*, 1873-1884.

30. Indenoindolone derivatives as topoisomerase II–inhibiting anticancer agents, Kashyap, M.; Kandekar, S.; Baviskar, A. T.; Das, D.; Preet, R. Mohapatra, P.; Satapathy, S. R.; Siddharth, S.; **Guchhait, S. K.**; Kundu, C. N.; Banerjee, U. C. *Bioorg. Med. Chem. Lett.* **2013**, *23*, 934-938.

29. C−H Bond Functionalization Under Metalation−Deprotonation Process: Regioselective Direct Arylation of 3‑Aminoimidazo[1,2−*a*]pyrazine. **Guchhait, S. K.**; Kandekar, S.; Kashyap, M.; Taxak, N.; Bharatam, P. V. *J. Org. Chem.* **2012**, *77*, 8321-8328.

28. A chemoselective Ugi-type reaction in water using TMSCN as a functional isonitrile equivalent: generation of heteroaromatic molecular diversity, **Guchhait, S. K.**; Chaudhary, V.; Madaan, C. *Org. Biomol. Chem.* **2012**, *10*, 9271-9277. (Cited in ChemInform, 2013, 44, DOI: 10.1002/chin.201318035)

27. One-Pot Three-Step Cu-Catalyzed Five/Four-Component Reaction Constructs Polysubstituted Oxa/Thia-zolidin-2-imines**,** Madaan, C.; Saraf, S.; Priyadarshani, G.; Reddy, P. P.; **Guchhait, S. K**.; Kunwar, A. C.; Sridhar, B. *Synlett*, **2012**, *23*, 1955-1959.

26. Intramolecular oxidative coupling of 3-indolylarylketones with Pd(II)-catalysis under air: convenient access to indenoindolones, **Guchhait, S. K.**; Kashyap. M.; Kandekar, S. *Tetrahedron Lett.* **2012**, *53*, 3919.

25. $CuSO_4$–Glucose for In Situ Generation of Controlled Cu(I)-Cu(II) Bi-catalysts: Multicomponent Reaction of Heterocyclic Azine and Aldehyde with Alkyne, and Cycloisomerization Towards Synthesis of N-Fused Imidazoles**,** **Guchhait, S. K.**; Chandgude, A. L.; Priyadarshani, G. *J. Org. Chem.* **2012**, 77, 4438.
(The work was highlighted in an organic chemistry portal, http://www.organic-chemistry.org/abstracts/lit3/627.shtm)

24. Scaffold hybridization in generation of indenoindolones as anticancer agents that induce apoptosis with cell cycle arrest at G2/M phase, Kashyap, M.; Das, D.; Preet, R.; Mohapatra, P.; Satapathy, S. R.; Siddharth, S.; Kundu, C. N., **Guchhait, S. K.** *Bioorg. Med. Chem. Lett.* **2012**, *22*, 2474.

23. Friedel–Crafts 3-(2-bromo)benzoylation of indoles and intramolecular direct arylation: An efficient route to indenoindolones, **Guchhait, S. K.**; Kashyap, M. *Synthesis*, **2012**, 619.

22. N-Fused imidazoles as novel anticancer agents that inhibit catalytic activity of topoisomerase IIα and induce apoptosis in G1/S phase. Baviskar, A. T.; Madaan, C.; Ranjan Preet; Mohapatra, P.; Jain, V.; Agarwal, A. **Guchhait, S. K**.; Kundu, C. N.; Banerjee, U. C.; Bharatam, P. V. *J. Med. Chem.* **2011**, *54*, 5013-5030. The article was recognized as "**highly cited article**", (American Chemical Society appreciated with certificate).

21. $ZrCl_4$–Mediated regio- and chemoselective Friedel-Crafts acylation of Indole. **Guchhait, S. K.**; Kashyap, M.; Kamble, H. *J. Org. Chem.* **2011**, *76*, 4753-4758.

20. Groebke-Blackburn-Bienaymé multicomponent reaction in scaffold modification of adenine, guanine, and cytosine: Synthesis of aminoimidazole-condensed nucleobases. **Guchhait, S. K.**; Madaan, C. *Tetrahedron Lett* **2011**, *52*, 56-58.

19. Towards molecular diversity: dealkylation of *tert*-butyl amine in Ugi-type multicomponent reaction product establishes *tert*-butyl isocyanide as a useful convertible isonitrile. **Guchhait, S. K**.; Madaan, C. *Org. Biomol. Chem.* **2010**, 3631-3634.

18. Direct C-H bond arylation of (hetero)arenes with aryl and heteroarylboronic acids. **Guchhait, S. K.**; Kashyap, M.; Saraf, S. *Synthesis* **2010**, 1166.

17. A new process of multicomponent Povarov reaction-aerobic dehydrogenation: Synthesis of polysubstituted quinolines. **Guchhait, S. K.**; Madaan, C.; Jadeja, K. *Tetrahedron Lett* **2009**, *50*, 6861-6865.

16. A highly flexible and efficient Ugi-type multicomponent synthesis of versatile N-fused aminoimidazoles. **Guchhait, S. K.**; Madaan, C.; Thakkar, B. S. *Synthesis* **2009**, 3293-3300.

15. An efficient regioselective versatile synthesis of N-fused 2- and 3-aminoimidazoles via Ugi-type multicomponent reaction mediated by zirconium(IV) chloride in polyethylene glycol-400. **Guchhait, S. K.;** Madaan, C. *Synlett* **2009**, 628.

Publications in post-doctoral and doctoral research

Publications in post-doctoral and doctoral periods

14. Synthesis and structure-activity relationships of metal-ligand complexes that potently inhibit cell migration. Beshir, A. B., **Guchhait, S. K.**, José, A. G.; Fenteany, G. *Bioorg. Med. Chem. Lett.* **2008**, *18*, 498.

13. Convenient synthesis of α,β-unsaturated phosphonates via a Mizoroki-Heck reaction of arylboronic acids with diethyl vinylphosphonate. Kabalka, G. W.; **Guchhait, S. K.;** Naravane, A. *Tetrahedron Lett .* **2004**, *45*, 4685.

12. Convenient synthesis of α,β-unsaturated sulfones via a Mizoroki-Heck reaction of arylboronic acids with phenyl vinyl sulfones. Kabalka, G. W.; **Guchhait**, **S. K.** *Tetrahedron Lett .* **2004**, *45*, 4021.

11. Synthesis of diprotected monosubstituted hydrazine derivatives from *tert*-butyl carbazates and boronic acids. Kabalka, G. W.; **Guchhait**, **S. K.** *Org. Lett*. **2003**, *5*, 4129.

10. Synthesis of (E)- and (Z)-alkenylphosphonates using vinylboronates. Kabalka, G. W.; **Guchhait, S. K.** *Org. Lett*. **2003**, *5*, 729.

9. Zinc tetrafluoroborate–catalyzed Mannich-type reaction of aldimines and silyl enol ethers in aqueous medium. Ranu, B. C.; Samanta, S.; **Guchhait**, **S. K.** *Tetrahedron* **2002**, *58*, 983.

8. Selective reduction of terminal alkynes to alkenes by indium metal. Ranu, B. C.; Dutta, J.; **Guchhait**, **S. K.** *J. Org. Chem*. **2001**, *66*, 5624.

7. Indium metal as a reducing agent. Selective reduction of carbon-carbon double bond in highly activated conjugated alkenes. Ranu, B. C.; Dutta, J.; **Guchhait**, **S. K.** *Org. Lett*. **2001**, *3*, 2603.

6. Stereoselective reduction of aryl-substituted gem-dibromides to vinyl bromides by indium metal. Ranu, B. C.; Samanta, S.; **Guchhait**, **S. K.** *J. Org. Chem*. **2001**, *66*, 4102.

5. Construction of bicyclo[2.2.2]octanone systems by microwave-assisted solid phase Michael addition followed by Al_2O_3-mediated intramolecular aldolisation. An eco-friendly approach. Ranu, B. C.; **Guchhait**, **S. K.;** Ghosh; K.; Patra, A. *Green Chemistry*, **2000**, 5.

4. A convenient and efficient procedure for selective deprotection of acetates by titanium(IV) isopropoxides. Ranu, B. C.; **Guchhait, S. K.;** Saha, M. *J. Indian Chem. Soc.* **1999**, *76*, 547. (Special issue dedicated to Professor D. Nasipuri, India on the occasion of his 75th birth anniversary)

3. Catalytic hydrogen transfer reductions using ammonium formate. A review. Ranu, B. C.; Sarkar, A.; **Guchhait; S. K.;** Ghosh, K. *J. Indian Chem. Soc*. **1998**, *75*, 690-694. (Special issue dedicated to Professor Sukh Dev, India on the occasion of his 75th birthday)

2. Stereoselective debromination of aryl-substituted *vic*-dibromide with indium metal. Ranu, B. C.; **Guchhait, S. K.;** Sarkar, A. *J. Chem. Soc., Chem. Commun*., **1998**, 2113.

1. Chemoselective hydrogenation of α, β-unsaturated sulfones and phosphonates via palladium-assisted hydrogen transfer by ammonium formate. Ranu, B. C.; **Guchhait, S. K.;** Ghosh, K. *J. Org. Chem*. **1998**, *63*, 5250.

Review Articles

2. Click Chemistry: A novel approach in drug discovery. Madaan, C.; **Guchhait, S. K.** *CRIPS*, **2008**, *9*, 11. (Review Article)

1. Green chemistry: Its potential use in sustainable synthesis of pharmaceuticals. Madaan, C.; **Guchhait, S. K.** *CRIPS*, **2007**, *8*, 68. (Review Article)

Invited Lectures

Invited Lectures delivered

1. **"Starting from Drug and Scaffold Hopping in Target-based Medicinal Chemistry Research: Discovery of Novel Topoisomerase IIα–Inhibiting Anticancer Agents", Professor D. Nasipuri Memorial Award Lecture 2014** in the 52nd Annual Convention of Chemists of the Indian Chemical Society held at JECRC University, Jaipur, Rajasthan, on December 28 – 30, 2015.

2. "**Trekking the Topoisomerase-Tour in Medicinal Chemistry Research: Discovery of Novel Topoisomerase IIα–Catalytic Inhibiting Anticancer Agents**" in the International Conference in Chemistry held on December 16-18, 2014, organized by Jadavpur University, Kolkata.

3. "**A rational approach in medicinal chemistry research: Discovery of novel topoisomerase IIα–targeting anticancer agents"** in the 50th "Annual Convention of Chemists-2013" organized by Indian Chemical Society, held at the Department of Chemistry & Centre of Advanced Studies in Chemistry, Punjab University, Chandigarh-160 014, on December 04-07, 2013.

4. "**Discovery of Topoisomerase IIα–targeting Novel Anticancer Agents**" in the "**MEDCHEM 2013**" conference on "**Advances in Anticancer Drug Discovery and Development**", organized by Indian Institute of Technology, Madras and AstraZeneca Bangalore, October 25-26, 2013.

5. "**Green Chemistry in Medicinal Chemistry Research: Development of Novel Anticancer Agents**", Symposium on Green Chemistry and Nanotechnology, Agartala, 2012.