

**Indian Association for the Cultivation
of Science**
School of Chemical Sciences
2A & 2B Raja S.C. Mullick Road
Kolkata, WB, 700032
India

Email: ocrkg@iacs.res.in
Phone: :+91-33-2473 4971 (Ext-1401)
Fax: +91-33-2473 2805
Website:
<http://iacs.res.in/athusers/index.php?navid=0&userid=IACS0053#765494>

Rajib Kumar Goswami, PhD

Research Interest:

- Total Synthesis of Natural Products.
- Developments of Methods for Organic Synthesis.
- Evaluation of Biomedical Applications of Natural Products and Their Synthetic Analogues.

Experiences:

Jun 2007 – September 2011

Postdoctoral Research

The Scripps Research Institute, California, USA

September 2011 – September 2016

Assistant Professor

Indian Association for the Cultivation of Science
Kolkata, India

September 2016 – February, 2020

Associate Professor

Indian Association for the Cultivation of Science
Kolkata, India

February 2020 – April 2024

Professor

Indian Association for the Cultivation of Science
Kolkata, India

April 2024 – Date

Senior Professor

Indian Association for the Cultivation of Science
Kolkata, India

Education:

| | |
|---|--|
| <i>Ph.D. in Chemistry-2008</i> | Indian Institute of Chemical Technology (2001-2007) Hyderabad, Telangana, India (Degree was awarded by University of Kalyani) |
| <i>M.Sc. in Chemistry (Organic Specialization)-2001</i> | Rajabazar Science College, University of Calcutta Kolkata, West Bengal, India. |
| <i>B.Sc. in Chemistry (Hons)- 1999</i> | Krishnath College, University of Calcutta Berhampore, West Bengal, India. |

Graduate and Postdoc Advisors:

Graduate: **Prof. Tushar K Chakraborty**, Indian Institute of Chemical Technology, India.

Postdoctoral: **Prof. Subhas C Sinha**, The Scripps Research Institute, USA.

Awards/Special Attainments:

- Bronze Medal, The Chemical Research Society of India-2023.
- SERB-STAR Fellowship Award, Government of India-2021
- TSRI Post-Doctoral Fellowship, The Scripps Research Institute, USA-2007
- Senior Research Fellowship, CSIR, India-2003
- Junior Research Fellowship, CSIR, India-2000
- GATE, Indian Institute of Technology, India-2000
- D. N. Roy Memorial Award, West Bengal, India-1998

Recognitions of Scholars from Goswami's Laboratory:

- Debobrata Paul, **Best Poster Award**, International Conference on Chemistry for Human Development (ICCHD-2018), Heritage Institute of Technology, Kolkata.
- Sanu Saha, **Best Oral Presentation**, Junior National Organic Symposium Trust Virtual Meeting (JNOST-2020), Indian Institute of Science, Bangalore.
- Himangshu Sharma, **Best Oral Presentation Award**, International Conference on Frontiers in Chemical Sciences (FICS-2022), IIT-Guwahati & ACS-Organic letter.
- Swapnamoy Ganguly, **RSC Dalton Transactions Best Poster Prize**, Contemporary Ideas, Innovations & Initiatives in Chemical Sciences (CI3CS-2023), Presidency University, Kolkata
- Moinul Haque Sahana, **Best Poster Award**, International Conference on Emerging Trends in Catalysis & Synthesis (IC-ETCS-2024), IIT-Kharagpur.
- Swapnamoy Ganguly, **Best Poster Award**, Nature Inspired Initiatives in Chemical Trends (NIICT-2024), CSIR-Indian Institute of Chemical Technology, Hyderabad.
- Kaushik Bhagat, **Best Poster Award, International Conference on Catalysis** (IC2-2024), Indian Association for the Cultivation of Science, Kolkata.
- Sujan Paul, **Best Poster Award**, Emerging Trends in Organometallics and Catalysis (ETOMC-2024), Indian Institute of Science and Educational Research, Kolkata.

Patents:

- *"Autophagy Inducing Synthesized Cyclic Depsipeptides in Cancer Chemotherapy"* Sourya Shankar Auddy, Shalini Gupta, Surajit Sinha and **Rajib Kumar Goswami***; *Indian Patent., (Filed; Application No 202331077534 dated 14.11.2023).*

Publications:

- (51). "Stereoselective Synthesis of the Northern Hemisphere of Proposed Structure of Neaumycin B" Himangshu Sharma, Sujan Paul, Swapnomoy Ganguly, Sourya Shankar Auddy and **Rajib Kumar Goswami*** (*communicated*).
- (50). "Decoding the Multifaceted Structure–Activity Relationship of Sunshinamide for Breast Cancer Eradication through Concurrent Modulation of Apoptotic and Ferroptotic Pathways via TrxR1 and Gpx4 Inhibition" Akash Chatterjee, Joyanta Mondal, Subhojit Paula, Himangshu Sharma, **Rajib Kumar Goswami***, Prosenjit Sen* (*Communicated*).
- (49). "Total Synthesis of Lipopeptide Bacilotetrin C: Discovery of Potent Anticancer Congeners Promoting Autophagy" Sourya Shankar Auddy, Shalini Gupta, Subrata Mandi, Himangshu Sharma, Surajit Sinha and **Rajib Kumar Goswami***; *ACS. Med. Chem. Lett*, 2024 (doi.org/10.1021/acsmedchemlett.4c00237).
- (48). "Stereoselective Synthesis of Polyketide Frameworks of Nemamide A and Euglenatides D-E" Himangshu Sharma and **Rajib Kumar Goswami***; *Synlett*, 2024 (DOI: 10.1055/a-2361-3510).
- (47). "Stereoselective Synthesis of Key Skeleton of Mohangic Acids A-E" Joyanta Mondal, Sandip Guchhait, Himangshu Sharma and **Rajib Kumar Goswami***; *Euro JOC*, 2024 (doi.org/10.1002/ejoc.202400365).
- (46). "Pestalotioprolide E targets thioredoxin reductase and exhibits defense against triple-negative breast cancer" Ruma Sarkar, Debobrata Paul, Sayantan Pradhan, Anindita Bhattacharya, **Rajib Kumar Goswami*** and Prosenjit Sen*; *Toxicology in Vitro*, 2024 (*Under minor revision*).
- (45). "Structure-Activity Relationship Study of Biselyngbyolide B Reveals Mitochondrial Fission-Induced Cytotoxicity in Cancer" Pratiti Mandal, Debobrata Paul, Himangshu Sharma, Sanu Saha, Partha Chakrabarti,* and **Rajib Kumar Goswami***; *ACS. Med. Chem. Lett*, 2024, 15, 696-705.
- (44). "Stereoselective Synthesis of Thailandamide A Methyl Ester" Himangshu Sharma, Swapnamoy Ganguly, Moinul Haque Sahana and **Rajib Kumar Goswami***; *Org. Biomol. Chem.*, 2024, 22, 1409-1419.
- (43). "Total Synthesis of Antibacterial Macrolide Soranjiolide A" Moinul Haque Sahana, Debobrata Paul, Himangshu Sharma and **Rajib Kumar Goswami***; *Org. Lett.*, 2023, 43, 7827-7831
- (42). "Total Synthesis of Antibacterial Polyketide Natural Product Thailandamide Lactone" Himangshu Sharma, Joyanta Mondal, Ananyo K. Ghosh, Ritesh Ranjan Pal and **Rajib Kumar Goswami***; *Chem. Sci.*, 2022, 13, 13403-13408.

- (41). "Late-Stage Functionalization: Total Synthesis of Beauveamide A & its Congeners and Their Anticancer Activities" Sanu Saha, Sourya Shankar Auddy, Akash Chatterjee, Prosenjit Sen and **Rajib Kumar Goswami***; *Org. Lett.* **2022**, *39*, 7113-7117 (one of the most read/downloaded papers for the month September-October, 2022).
- (40). "Stereoselective Synthesis of Acyclic Skeleton of Boscartin A" Dhiman Saha, Moinul Haque Sahana, Gour Hari Mandal and **Rajib Kumar Goswami***; *Synlett*, **2022**, *33*, 1943-1947.
- (39). "Total Synthesis of Strasseriolide A" Moinul Haque Sahana, Dhiman Saha and **Rajib Kumar Goswami***; *J. Org. Chem.* **2022**, *17*, 11805-11815 (one of the most read/downloaded papers for the month August-September, 2022).
- (38). "Synthesis of Key Skeleton of Phosphoeleganin" Gour Hari Mandal, Dhiman Saha, Sourya Shankar Auddy and **Rajib Kumar Goswami***; *Synlett*, **2023**, *34*, 673-677 (Invited Article).
- (37). "Cananginone abrogates EMT in breast cancer cells through targeting Hedgehog signaling" Chandra Bose, Ujjal Das, Tapan Kumar Kuilya, Joyanta Mondal, Jhuma Bhadra, Priyanjalee Banerjee, **Rajib Kumar Goswami** and Surajit Sinha*; *Chem. Biodiversity*, **2022**, *19*, e202100823.
- (36). "Total Synthesis and Stereochemical Assignment of Bipolamide A Acetate" Sourya Shankar Auddy, Sanu Saha and **Rajib Kumar Goswami***; *Org. Biomol. Chem.*, **2022**, *20*, 3348-3358.
- (35). "Asymmetric Total Synthesis of Amphirionin-2" Dhiman Saha, Gour Hari Mandal and **Rajib Kumar Goswami***; *J. Org. Chem.* **2021**, *86*, 10006-10022.
- (34). "Total Synthesis: the structural confirmation of natural product" Debobrata Paul, Ashis Kundu, Sanu Saha and **Rajib Kumar Goswami***; *Chem. Commun.*; **2021**, *57*, 3307-3322 (Invited Feature Article).
- (33). "Intramolecular Heck Reaction in Total Synthesis of Natural Products: An Update." Debobrata Paul, Subhendu Das, Sanu Saha, Himangshu Sharma and **Rajib Kumar Goswami***; *European Journal of Organic Chemistry*, **2021**, 2057-2076 (Top cited paper in EJOc for the year 2021-2022).
- (32). "Cyclodepsipeptide Alveolaride C: Total Synthesis and Stereochemical Assignment" Sanu Saha, Debobrata Paul and **Rajib Kumar Goswami***; *Chem. Sci.*, **2020**, *11*, 11259-11265. (Highlighted in *ChemistryViews.org* and Published as literature coverage in *Synform*, 2021/03, A43-A45).
- (31). "Biselyngbyolides A & C: Total Synthesis and Their Anticancer Activities" Debobrata Paul, Moinul Haque Sahana, Pratiti Mandal, Partha Chakrabarti and **Rajib Kumar Goswami***; *Org. Biomol. Chem.*, **2020**, *18*, 7151-7164.

- (30). "Total synthesis of nafuredin B" Gour Hari Mandal, Dhiman Saha and **Rajib Kumar Goswami***; *Org. Biomol. Chem.*, 2020, 18, 2346-2359.
- (29). "Total Synthesis and Stereochemical Assignment of Sunshinamide and Its Anticancer Activity" Joyanta Mondal, Ruma Sarkar, Prosenjit Sen* and **Rajib Kumar Goswami***; *Org. Lett.* 2020, 22, 1188-1192.
- (28). "Total Synthesis and Stereochemical Assignment of Penicitide A" Dhiman Saha, Sandip Guchhait and **Rajib Kumar Goswami***; *Org. Lett.* 2020, 22, 745-749.
- (27). "Studies towards the Synthesis of Macrotermycin C: Stereoselective Construction of Acyclic Skeleton of the Aglycon." Sandip Guchhait and **Rajib Kumar Goswami***; *Org. Biomol. Chem.*, 2019, 17, 9502-9509.
- (26). "Total Synthesis of Pestalotioprolide E and Structural Revision of Pestalotioprolide F" Debobrata Paul, Sanu Saha and **Rajib Kumar Goswami***; *Org. Lett.*, 2018, 20, 4606-4609.
- (25). "Studies toward the Synthesis of Strevertenes A and G: Stereoselective Construction of C₁-C₁₉ Segment of the Molecules" Tapan Kumar Kuilya, Subhendu Das, Dhiman Saha and **Rajib Kumar Goswami***; *Org. Biomol. Chem.*, 2018, 16, 7595-7608. (*Published as inside cover page*).
- (24). "Total Synthesis of Cytospolide Q" Shamba Chatterjee, Gour Hari Mandal and **Rajib Kumar Goswami***; *ACS Omega*, 2018, 3, 7350-7357 (*Invited Article*).
- (23). "Studies Directed toward the Stereoselective Synthesis of Cytospolide E" Shamba Chatterjee, Tapan Kumar Kuilya and **Rajib Kumar Goswami***; *ACS Omega*, 2018, 3, 1041-1059 (*Invited Article*).
- (22). "Total Synthesis of Pestalotioprolide G and Putative Structure of Pestalotioprolide H" Debobrata Paul, Sayantan Das, and **Rajib Kumar Goswami***; *J. Org. Chem.*, 2017, 82, 7437-7445.
- (21). "Total Synthesis of Marine Natural Products Separacenes A and B" Subhendu Das and **Rajib Kumar Goswami***. *Org. Biomol. Chem.*, 2017, 15, 4842-4850.
- (20). "SMI-Ribosome inactivating protein conjugates selectively inhibit tumor cell growth" Saumya Roy, Jun Y. Axup, Jane S. Forsyth, **Rajib K. Goswami**, Benjamin M. Hutchins, Krishna M. Bajuri, Stephanie A. Kazane, Vaughn V. Smider, Brunhilde H. Felding* and Subhash C. Sinha*; *Chem. Commun.*, 2017, 53, 4234-4237.
- (19). "Stereoselective Total Synthesis of Carolacton" Tapan Kumar Kuilya and **Rajib Kumar Goswami***; *Org. Lett.*, 2017, 19, 2366-2369.

- (18). "Total Synthesis of Reported Structure of Baulamycin A and Its Congeners" Sandip Guchhait, Shamba Chatterjee, Ravi Sankar Ampapathi* and **Rajib Kumar Goswami***; *J. Org. Chem.*, 2017, 82, 2414–2435. (Subsequent work was published in *Nature*, 2017, 547, 436–440 by Agrawal et al.; Interview published in *Chemical & Engineering News*, 2017, Volume 95, Issue 31).
- (17). "Total Synthesis of Cananginone C and Structural Revision of Debilisone A" Tapan Kumar Kuilya and **Rajib Kumar Goswami***; *Org. Biomol. Chem.*, 2016, 14, 8789-8799.
- (16). "Chemically Programmed Bispecific Antibodies in Diabody Format" Even Walseng, Christopher G. Nelson, Junpeng Qi, Alex R. Nanna, William R. Roush, **Rajib K. Goswami**, Subhash. C. Sinha, Terrence R. Burke, Jr. and Christoph Rader*; *J. Biological Chem.* 2016, 291, 19661-19673.
- (15). "Stereoselective Total Synthesis of Bioactive Marine Natural Product Biselyngbyolide B" Sayantan Das, Debobrata Paul and **Rajib Kumar Goswami***; *Org. Lett.*, 2016, 18, 1908–1911.
- (14). "Asymmetric Total Synthesis of Bioactive Natural Lipid Mycalol" Subhendu Das, Tapan Kumar Kuilya and **Rajib Kumar Goswami***; *J. Org. Chem.* 2015, 80, 6467-6489.
- (13). "Chemically Programmed Bispecific Antibody Targeting Legumain Protease and $\alpha\beta3$ Integrin Mediates Strong Antitumor Effects" Yuan Liu, **Rajib K. Goswami**, Cheng Liu, and Subhash C. Sinha*; *Molecular Pharmaceutics*. 2015, 12, 2544-2550.
- (12). "Stereoselective Total Synthesis of Marine Cyclodepsipeptide Calcaripeptides A–C" Sayantan Das and **Rajib Kumar Goswami***; *J. Org. Chem.* 2014, 79, 9778-9791.
- (11). "Stereoselective Total Synthesis of Cytospolide P" Shamba Chatterjee, Sandip Guchhait and **Rajib Kumar Goswami***; *J. Org. Chem.* 2014, 79, 7689-7695.
- (10). "Stereoselective total synthesis of cananginones (D-I) using Ireland Claisen rearrangement as a key step" Tapan Kumar Kuilya, Shamba Chatterjee, **Rajib Kumar Goswami***. *Tetrahedron*. 2014, 70, 2905-2918.
- (9). "Stereoselective Total Synthesis of Ieodomycins A and B and Revision of the NMR Spectroscopic Data of Ieodomycin B" Sayantan Das and **Rajib Kumar Goswami***; *J. Org. Chem.* 2013, 78, 7274-7280.
- (8). "Synthesis and Evaluation of the Aldolase Antibody-Derived Chemical- Antibodies Targeting $\alpha5\beta1$ Integrin" **Rajib Kumar Goswami**, Yuan Liu, Cheng Liu, Richard A. Lerner *, Subhash C. Sinha *; *Molecular Pharmaceutics*. 2013, 10, 538-543.
- (7). "Chemically Programmed Antibodies Targeting Multiple Alpha (v) Integrins and Their Effects on Tumor-Related Functions in Vitro" **Rajib Kumar Goswami**, Krishna M Bajjuri, Jane S. Forsyth, Sanjib Das, Zheng-Zheng Huang, Brunhilde Felding-Habermann, Subhash C Sinha*; *Bioconjugate Chem.* 2011, 22, 1535-1544.

- (6). "Multiple catalytic aldolase antibodies suitable for chemical programming" **Rajib Kumar Goswami**, Zheng-Zheng Huang, Jane S. Forsyth, Bruhilde Felding Habermann, Subhash C. Sinha*; *Bioorganic and Medicinal Chemistry Lett.* 2009, 19, 3821-3824.
- (5). "Efficient chemical approaches to bispecific antibodies of high valency" Julia I. Gavriluk, Ulrich Wuellner, Syed Salahuddin, **Rajib Kumar Goswami**, Subhash C. Sinha, Carlos F. Barbas III*. *Bioorganic and Medicinal Chemistry Lett.* 2009, 19, 3716-3720.
- (4). "Studies directed towards the total synthesis of botcinic acid, the revised structure botcinolide: synthesis of the highly substituted tetrahydropyran moiety" Tushar K Chakraborty*, **Rajib Kumar Goswami**. *Tetrahedron Lett.* 2007, 48, 6463-6465.
- (3). "Studies directed towards the total synthesis of lycoperdinosides: stereoselective construction of the C₁-C₉ and C₁₀-C₂₁ segments of the molecules" Tushar K Chakraborty*, **Rajib Kumar Goswami**, Midde Sreekanth. *Tetrahedron Lett.* 2007, 48, 4075-4078.
- (2). "Studies directed towards the synthesis of 2-epi-botcinolides: synthesis of nonalactone ring of 2-epibotcinolide" Tushar K Chakraborty*, **Rajib Kumar Goswami**; *Tetrahedron Lett.* 2006, 47, 4917-4919. Corrigendum to "Studies directed towards the synthesis of 2-epi-botcinolides: synthesis of nonalactone ring of 2-epibotcinolide." *Tetrahedron Lett.* 2006, 47, 9373.
- (1). "Total synthesis of (3R,4S,5S,9S)-3,5,9-trihydroxy-4-methyl undecanoic acid δ -Lactone" Tushar K Chakraborty*, **Rajib Kumar Goswami**; *Tetrahedron Lett.* 2004, 45, 7637-7639.

Invited Lectures:

- 162nd Birth Anniversary Celebration of Acharya P C Ray by the Indian Chemical Society, Rajabazar Science College, Kolkata, India, August 2, 2023
- 31st CRSI symposium, Department of Chemistry, NIT-Rourkela, Orissa, India, July 6-8, 2023.
- Department of Chemical Sciences, Indian Institutes of Science Education and Research-Kolkata, India, June 12, 2023.
- National Organic Symposium Trust Meeting-Hotel Rama International, Aurangabad, India, February 17-20, 2023.
- Department of Chemistry, North-Eastern Hill University, Shillong, India, November 14, 2022
- Krishnath Day Special Lecture, Krishnath College, Berhampore, West Bengal, India, April 26, 2022
- Advances In Chemical Research, Department of Chemistry, Manipur University, India, April 22-23, 2022

- Organic Chemistry Symposium, Department of Chemistry, Indian Institute of Technology-Kanpur, India, April 2-3, 2022
- Annual Symposium, School of Chemical Sciences, IACS-Kolkata, India, March 10-11, 2022
- Recent Trends in Chemical Sciences – Organic & Bio-Chemistry, Dept. of Chemistry, Indian Institute of Technology-Kharagpur and the Dept. of Chemical Sciences, Indian Institutes of Science Education and Research-Kolkata, India, December 23, 2021
- Department of Organic Chemistry, Indian Institute of Science, Bangalore, India, November 12, 2021
- Department of Chemistry, North-Eastern Hill University, Shillong, India, November 1, 2021
- Department of Chemistry, Presidency University-Kolkata, India, February 29, 2020.
- Department of Chemistry, Tsinghua University, Beijing, China, May 25, 2019.
- School of Chemistry and Chemical Engineering, Shaanxi University, Xi'an, China, May 20, 2019.
- Department of Chemistry, Indian Institute of Technology-Guwahati, India, April 24, 2019.
- Department of Chemistry, Indian Institute of Technology-Kharagpur, India, April 22, 2019.
- International Conference on Chemical & Biological Sciences in Drug Discovery; Department of Chemistry, Berhampur University, Berhampur, India, March 8-10, 2019.
- Department of Chemistry, University of Calcutta-Kolkata, India, December 20, 2018.
- National Organic Symposium Trust Meeting-Hotel Grand Hyatt, Goa, India, September 6-9, 2018.
- National Conference in Chirality-Maharaja Sayajirao University of Baroda, Vadodara, India, November 11, 2015.
- Royal Society of Chemistry, West India Chapter-Maharaja Sayajirao University of Baroda, Vadodara, India, November 10, 2015.
- National Organic Symposium Trust Meeting-Hotel Le Meridien, Jaipur, India, October 27-30, 2015.
- Kaleidoscope: A Discussion Meeting in Chemistry-Goa, India, May 2, 2015.
- Royal Society of Chemistry, Eastern India Chapter-Indian Association for the Cultivation of Science, Kolkata, India-April 8, 2015.
- Department of Organic Chemistry, National Chemical Laboratory-Pune, India, March 14, 2011.
- Department of Chemistry, Indian Institutes of Science Education and Research-Mohali, India, March 11, 2011.
- Department of Chemistry, Indian Institute of Technology-Kharagpur, India, March 9, 2011.
- Department of Organic Chemistry, Indian Institute of Chemical Biology-Kolkata, India, March 8, 2011.
- Department of Organic Chemistry, Indian Institute of Science-Bangalore, India, March 7, 2011.

- School of Chemistry, Hyderabad Central University, Hyderabad, India, March 4, 2011.
- Department of Chemistry, Indian Institute of Technology-Madras, India, March 3, 2011.

Thesis and Project Supervisor:

Ph.D Students Supervised:

- 1) Dr. Sayantan Das (2011-2016), Post-Doctoral Fellow, Tel Aviv University, Israel; Currently Scientist in Indian Oil Corporation Ltd.
- 2) Dr. Tapan kumar Kuliya (2012-2017), Post-Doctoral Fellow, Wayne State University, USA followed by Scientist in Syngenta Bio-Sciences Pvt. Ltd, Goa, and currently Scientist- TCG Lifesciences Private Ltd. (Chembiotek), Kolkata.
- 3) Dr. Shamba Chatterjee (2012-2017), Post-Doctoral Fellow, University of Mississippi, USA.
- 4) Dr. Subhendu Das (2013-2019), Research Investigator-Discovery Chemistry in Syngene International Ltd, Bangalore and currently Scientist-TCG Lifesciences Private Ltd. (Chembiotek), Kolkata.
- 5) Dr. Sandip Guchhait (2014-2019), Post-Doctoral Fellow, Technion University, Israel, and Currently Scientist- TCG Lifesciences Private Ltd. (Chembiotek), Kolkata.
- 6) Dr. Debobrata Paul (2014-2021), Post-Doctoral Fellow at University of Kansas, USA.
- 7) Dr. Gour Hari Mandal (2015-2021), Post-Doctoral Fellow at University of Kansas, USA.
- 8) Dr. Dhiman Saha (2016-2022), Currently Post-Doctoral Fellow at Darmouth College, New Hampshire, USA.
- 9) Dr. Joyanta Mondal (2016-2023), Currently Research Scientist-Jubilan Biosys, Delhi, India.
- 10) Dr. Sanu Saha (2017-2022), Post-Doctoral Fellow, IACS-Kolkata (2022-2023), Currently in Research Scientist-Jubilan Biosys Delhi, India.
- 11) Mr. Sourya Shankar Auddy (2018-2024), (Thesis submitted), Currently in Research Scientist-Jubilan Biosys Delhi, India.

PhD Students Ongoing:

(1). Mr. Himangshu Sharma, CSIR (2018-date); (2). Mr. Moinul Haque Sahana, CSIR (2019-date); (3). Mr. Nasif Ali, DST-Inspire (2021-date); (4) Mr. Subrata Mandi, UGC (2022-date); (5) Mr. Sandip Kr Mondal, UGC (2022-date); (6) Mr. Sujan Paul, CSIR (2023-date); (7) Mr. Sanju Bhaskar, UGC (2023-date); (8). Mr. Kaushik Bhagat, IACS-Int Ph.D (2024-date); (9) Ms. Leena Baidya, UGC (2024-date).

Post-Doctoral Fellow:

- (1) Dr. Ashis Kundu (2017-2020); Currently Research Scientist in Jubilant Biosys Ltd, India.
- (2) Dr. Subhro Mandal (2023-date), NPDF fellow.

M.Sc 1-year Project Students:

(1). Mr. Jayanta Dey (2018-2019); (2). Mr. Mayuk Sarkar (2019-2020); (3). Mr. Swapnamoy Ganguly (2022-2023); (4). Mr. Maheswar Tantubay (2022-2023). (5). Mr. Tuhin Gayen (2023-2024). (6). Mr. Kaushik Bhagat (2023-2024).

Short Term Project Students:

(1). Mr. Arpan Pal-NIT Rourkela, 2012; (2). Mr. SK Safikul Islam-Ramakrishna Mission Vidyamandira, Belur Math, West Bengal, 2012; (3). Ms. Soma Roy-Jadavpur University, West Bengal, 2012; (4). Mr. Subhasis Paul-IIT, Delhi, 2012; (5). Mr. Bijaideep Dutta-IIT Madras, 2013; (6). Mr. Chiranjit Mukherjee-Ramakrishna Mission Residential College, Narendrapur, West Bengal, 2013; (7). Mr. Dibyendu Chakraborty-Ramakrishna Mission Residential College, Narendrapur, West Bengal, 2013; (8). Mr. Bikash Maiti-RKMVC College, Rahara, West Bengal, 2013; (9). Mr. Subrata De-Visvabharati University, West Bengal, 2013; (10). Mr. Aishik Bhattacharya-Ramakrishna Mission Residential College, Narendrapur, West Bengal, 2013; (11). Ms Sayantani Goswami-Amity University, Uttar Pradesh, 2014; (12). Ms Rajarsree Kundu-Presedency University, Kolkata, West Bengal, 2015; (13). Mr. Sayan Banerjee-Jadavpur University, Kolkata, West Bengal, 2016; (14). Ms. Kausani Ghatak-Jadavpur University, Kolkata, West Bengal, 2016; (15). Ms. Depanjana Choudhury-St. Xavier's College, Mumbai, 2016; (16). Mr. Rudraneel Roy Chowdhury-Jadavpur University, Kolkata, West Bengal, 2016; (17). Mr. Tanmoy Mandal-Barasat State University, Barasat, West Bengal, 2016; (18). Ms. Krishna Biswas-Central University of Karnataka, Kalaburagi, Karnataka, 2016; (19). Mr. Debojyoti Bag-Central University of Karnataka, Kalaburagi, Karnataka, 2016; (20). Ms. Binita Patra-Behala College, Kolkata, West Bengal, 2017; (21). Ms. Susmita Hazra-Behala College, Kolkata, West Bengal, 2017; (22). Mr. Biki Ghosh-Ramakrishna Mission Residential College, Narendrapur, West Bengal, 2017; (23). Ms. Ruchira Basu-IIT Madras, 2017; (24). Mr. Asim Bisoi-IISER, Bhopal, 2017; (25). Mr. Arpan Halder-Raja Bazar Science College, University of Calcutta, 2018; (26). Ms. Priyanka Saha-Raja Bazar Science College, University of Calcutta, West Bengal, 2018; (27). Ms. Nabishna Bhunia-Behala College, Kolkata, West Bengal, 2018; (28). Mr. Sudipto Mondal-Ramakrishna Mission Residential College, Narendrapur, West Bengal, 2018; (29). Mr. Dasari Srinivas- Kakatiya University, Warangal, Telangana, 2018; (30). Mr. Kanhaiya Kumar Bhagat-St Xavier's College, Kolkata, West Bengal, 2018; (31). Mr. Subhrajyoti Ghosh-Ramakrishna Mission Residential College, Narendrapur, West Bengal, 2019; (32). Ms. Shivani Chandel-NIPER Kolkata, 2019; (33). Mr. Soumyadeep Saha- Indian Institute of Science Education and Research, Berhampur, Odisha, 2019; (34). Mr. Swapnamoy Ganguly- Indian Association for the Cultivation of Science, Kolkata, 2021; (35). Ms. Snehanka Bose-West Bengal State University, West Bengal, 2022; (36). Ms. Tiasa Das - Pondicherry University, Pondicherry, 2023; (37). Ms. Ms. Ankita Sikder- West Bengal State University, 2023. (38). Ms. Arkamitra Roy- IIT-Kanpur, 2023. (38). Ms. Arkamitra Roy- IIT-Kanpur, 2023. (39). Mr. Soumojit Kundu- IIT-Kanpur, 2023. (40). Ms. Srabasti Dhar- IIT-Bombay, 2023. (41). Ms. Swastik Mandal- IISER-Pune, 2024. (42). Ms. Angshuman Saha Kapuria – IISER-Kolkata, 2024.

Extramural Projects as PI:

| Title | Funding Agency | Duration |
|---|-----------------------|-----------|
| <ul style="list-style-type: none"> • <i>Stereoselective Total Synthesis of Biologically Active Macrocyclic Lactone Aculeximycin.</i> | BRNS | 2012-2015 |
| <ul style="list-style-type: none"> • <i>Stereoselective Total Synthesis of Biologically Active Oxo Polyene Macrolides Strevertene A-G and Their Analogues.</i> | DST (Fast Track) | 2012-2015 |
| <ul style="list-style-type: none"> • <i>Total Synthesis of Biologically Active Nonanolides – Cytospolides and Decytospolides.</i> | CSIR | 2013-2016 |
| <ul style="list-style-type: none"> • <i>Stereoselective Total Synthesis of Cyclic Ether Containing Macrolactins by Chiral Pool Approach.</i> | DST (Green Chemistry) | 2013-2016 |
| <ul style="list-style-type: none"> • <i>Total Synthesis of Marine Macrocyclic Lactone Biselyngbyaside and Its Variants and Their Biological Activities.</i> | SERB | 2016-2019 |
| <ul style="list-style-type: none"> • <i>Total synthesis of biologically potent cyclodepsipeptide natural products nannocystins and their relevant analogues.</i> | CSIR | 2017-2020 |
| <ul style="list-style-type: none"> • <i>Total Synthesis of Macrocyclic Polyketide Natural Products with Conjugated olefins and Their Relevant Analogues and Evaluation of Their Anticancer Activities.</i> | SERB | 2020-2023 |
| <ul style="list-style-type: none"> • <i>Total Synthesis of Marine Macrocyclic Natural Products and Exploration of Their Anticancer Relevance with Structural Variations.</i> | SERB-STAR | 2021-2024 |
| <ul style="list-style-type: none"> • <i>Total Synthesis of Hybrid Polyketide-Cyclic Peptide based Bioactive Natural Products and Analogues Thereof.</i> | SERB | 2023-2026 |

Citation Index:

Total Citations:747, h-index: 16 (till July, 2024).



Teaching Activities:

Prof. Goswami taught/teaching several courses on synthetic organic chemistry to the Master and PhD level students from 2012 to till date. The courses based on methods, reagents (Organic Synthesis-I, CHS/AIS-424) taught from 2012 to 2021 and currently teaching strategies in organic chemistry (Organic Synthesis-II, SCS 5102 C/PHD103). Moreover, Dr. Goswami is taking the organic practical course for UG-IV (CHS 2211) from 2020.

Synergistic Activities:

Reviewer for Journals: JACS, ACS Catalysis, Chemical Sciences, Organic Letter, The Journal of Organic Chemistry, ACS Omega, Tetrahedron, Tetrahedron Letters, Journal of Molecular Structure, Bioorganic and Medicinal Chemistry Letter, Organic & Biomolecular Chemistry, Chemistry- A European Journal, European Journal of Organic Chemistry, RSC Advances, New Journal of chemistry, Marine Drug, Studies in Natural Products Chemistry (Bioactive Natural Products).

Impact of the Contributions in the Field Concerned:

Prof. Goswami's marvelous contributed in the area of enantioselective total synthesis of novel natural products of therapeutic significance. His original work has opened avenues in organic synthesis, especially the structural corrections ([mycalol](#), [baulamycin A](#), [debilisone A](#), [penicitide A](#), [alveolaride C](#), [bipolamide A](#) and more), which have profound impacts to the practitioners engaged in the basic research of total synthesis of bioactive natural products. His laboratory successfully developed synthetic routes of nearly 40 marine and terrestrial promising natural products till the date. His finding of new variants of [biselyngbyolide B](#) and [sunshinamide](#) as well as finding of promising anticancer activity [bacilotetrin C](#) will have good value in basic organic chemistry and especially applied pharmaceutical research.