

CURRICULUM VITAE

Dr. Yellaiah Tangella

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Current address: Lab No.425, Department of Chemistry, Indian Institute of Technology Bombay, Mumbai-400076, India.

Objective

I am looking for an appropriate position that would further enhance my research experience and creativity.

Professional and Industrial Research Experience

- **Indian Institute of Technology Bombay, Mumbai, India** **Oct-2019 to Present**
Institute Postdoctoral Fellow, Department of Chemistry
Research advisor: Prof. Sambasivarao Kotha
- **GVK BIO Sciences Pvt. Ltd. Hyderabad, India** **Aug-2018 to Sept-2019**
Associate Scientist, R&D synthesis
- **CSIR-Indian Institute of Chemical Biology, Kolkata, India** **March-2012 to April-2013**
Junior Research Fellow, Department of Chemistry
Research advisor: Dr. Biswadip Banerjee
- **GVK BIO Sciences Pvt. Ltd. Hyderabad, India** **March-2010 to Feb-2012**
Senior Chemist, R&D synthesis

Academic Qualifications

- **CSIR-Indian Institute of Chemical Technology, Hyderabad, India.** **May-2013 to July-2018**
- Ph. D. in Organic Synthesis and Medicinal Chemistry
Title: "Development of Metal-Free Strategies to Diverse Heterocycles and Synthesis of β -Carboline, Dihydrofuran Congeners as Potential Anticancer Agents"
Thesis advisor: Dr. Bathini Nagendra Babu
Thesis Co-advisor: Dr. Ahmed Kamal
- **Master of Science** in Organic Chemistry, Kakatiya University, Telangana, India. **2007 to 2009**
First Class with Distinction (72%)
- **Bachelor of Science** in Chemistry, Physics and Mathematics **2003 to 2006**
First Class with Distinction (80%); Kakatiya University, Telangana, India.
- **Intermediate:** First Division (84%); Vivekananda Jr. College, Board of Intermediate Education, Telangana, India. **2001 to 2003**
- **High School:** First Division (83%); ZPSS Govt. School, Board of Secondary Education, Telangana, India. **2000 to 2001**

Research Interests

- Organic Synthesis | Natural Products Synthesis | Medicinal Chemistry | Drug discovery
Development of Transition Metal-Free or Catalyzed Methodologies

Research Contributions

- Development of novel methodologies in organic synthesis
- Synthesis of bioactive natural products by applying new methods
- Synthesis of DNA-interactive Topoisomerase inhibitors for cancer therapy
- Synthesis of degradation-related impurities and interaction-related impurities in drug discovery

Hands on Instrumental Experience

- Nuclear Magnetic Resonance Spectrometer (NMR Spectrometer)
- UV-vis spectrophotometer
- Fluorescence spectrometer
- FT-IR spectrometer
- LC-MS spectroscopy
- Glove box

Selected Honors, Awards and Fellowships

- **Best thesis award** for the year 2019 from CSIR-IICT, Hyderabad, India
- **Outstanding performance award** in GVK Bio, Hyderabad, India
- Awarded with **CSIR-Senior Research fellowship** at CSIR-IICT (May-2015 to May-2018)
- Awarded with **Junior Research Fellowship** (CSIR-NET-June-2011)
- Awarded with **Junior Research Fellowship** (CSIR-NET-December-2011)
- Qualified **Graduate Aptitude Test** (GATE-2010) Ministry of Science and Technology, Govt. of India

Scientific Skills and Technical Exposure

- Expertise in carrying out various organic reactions from milligram to multi gram scale.
- Excellent skills in purification of organic compounds using recrystallization, distillation and chromatography as well as preparative TLC techniques.
- Efficient in interpreting NMR, MASS, and I.R data.
- Working knowledge and hands on experience in handling various hygroscopic, air sensitive reactions and multistep synthesis.
- Efficiently performed several named reactions in organic chemistry.
- Team player with collaborations from interdisciplinary fields.
- Conversant with commonly used computer Softwares: MS-Office, MestReNova, Mestrec23, Bruker topspin, Adobe Photoshop, Chem Office (chemdraw, 3D), ISIS Draw, Reaxys and Sci-Finder.
- Proficient in English language including oral and written comprehension.
- Capable of preparation research reports and manuscripts.

List of Publications

1. "Synthesis of mixed musks *via* Eschenmoser–Tanabe fragmentation, enyne metathesis and Diels–Alder reaction as key steps" Sambasiavarao Kotha, **Yellaiah Tangella**, Arpit Agrawal *RSC Advances*, 2022, 12, 14278-14281.
2. "Recent advances in benzocyclobutene chemistry" **Yellaiah Tangella**, Kakali Lahiri and Sambasivarao Kotha *Asian J. Org. Chem.*, 2021, 10, 3166-3185.
3. "Design, synthesis and biological evaluation of hybrid C3-quinazolinone linked β -carboline conjugates as DNA intercalative topoisomerase I inhibitors" **Yellaiah Tangella**, Manda Sathish, Manasa Kadagathur, Narayana Nagesh, and Bathini Nagendra Babu *J Clin Pharm*, 2021, 5, 1020.
4. "Modular approaches to cyclopentanoids and their heteroanalogs" **Yellaiah Tangella**, Sambasivarao Kotha *Synlett*, 2020, 31, 1976–2012.
5. "Regioselective ring expansion of 3-ylideneoxindoles with tosyldiazomethane (TsDAM): A metal-free and greener approach for the synthesis of pyrazolo-[1,5-*c*]quinazolines" Gopathi Ramu, **Yellaiah Tangella**, Srinivas Ambala, Bathini Nagendra Babu *J. Org. Chem.*, 2020, 85, 5370–5378.
6. "Synthesis of substituted cinnamido linked quinazolinone congeners as potential anticancer agents via mitochondrial dependent intrinsic apoptotic pathway" Kesari Lakshmi. Manasa, Mohd A. Saifi, **Yellaiah Tangella**, Chandraiah Godugu, Mallika Alvala *Anti-Cancer Agents in Med. Chem.*, 2019, 19, 1935-1948.
7. "A metal-free approach for the synthesis of amides/esters with pyridinium salts of phenacyl bromides via oxidative C–C bond cleavage" Kesari Lakshmi Manasa, **Yellaiah Tangella**, Namballa Hari Krishna, Mallika Alvala *Beilstein J. Org. Chem.*, 2019, 15, 1864–1871.
8. "Regioselective ring-expansion of isatins with in situ generated α -aryldiazomethanes: Direct access to viridicatin alkaloids" **Yellaiah Tangella**, Kesari Lakshmi Manasa, Namballa Hari Krishna, B. Sridhar, Ahmed Kamal, Bathini Nagendra Babu *Org. Lett.*, 2018, 20, 3639–3642.
9. "Molecular iodine catalysed oxidative C(Sp²)-C(alkyl) bond cleavage of aryl/heteroaryl alkyl ketones: An efficient strategy to access fused polyheterocycles" Geeta Sai Mani, Ayanampudi Venkata Subba Rao, **Yellaiah Tangella**, Satish Sunkari, Faria Sultana, Namballa Hari Krishna, Nagula Shankaraiah, Ahmed Kamal *New J. Chem.*, 2018, 42, 15820-15829.
10. "Synthesis of DNA interactive C3-trans-cinnamide linked β -carboline conjugates as potential cytotoxic and DNA topoisomerase I inhibitors" Manda Sathish, Sabanis Chetan Dushantrao, Namballa Hari Krishna, Shalini Nekkanti, **Yellaiah Tangella**, Gunda Srinivas, Shirisha Cherukommu, Nagula Shankaraiah, Narayana Nagesh, Ahmed Kamala *Bioorg. Med. Chem.*, 2018, 26, 4916-4929.
11. "Synthesis of podophyllotoxin linked β -carboline congeners as potential anticancer agents and DNA topoisomerase II inhibitors" Manda Sathish, Botla Kavitha, V. Lakshma Nayak, **Yellaiah Tangella**, Ayyappan Ajitha, Shalini Nekkanti, Abdullah Alarifi, Nagula Shankaraiah, Narayana Nagesh, Ahmed Kamal *Eur. J. Med. Chem.*, 2018, 144, 557-571.
12. "Tandem synthesis of 3,4-disubstituted pyrroles from Aldehydes, 1,3-diketones and TosMIC under metal-free conditions" Kesari Lakshmi Manasa, Kasinathuni Naga Visweswara Sastry, **Yellaiah Tangella**, Bathini Nagendra Babu *ChemistrySelect*, 2018, 3, 2730–2733.
13. "Neo-tanshinlactone D-ring modified novel analogues induce apoptosis in human breast cancer cell via DNA damage" Sunil Kumar Killi, Atul Katarkar, Satadru Chatterjee, **Yellaiah Tangella**, Chandraday Proddhan, Keya Chaudhuri and Biswadip Banerji *Bioorg. Med. Chem.*, 2017, 25, 202–212.

14. "Sulfamic acid catalyzed one-pot, three-component green approach: synthesis and cytotoxic evaluation of pyrazolyl-thiazole congeners" B. Sridevi, **Yellaiah Tangella**, Korrapati Suresh Babu, Jagadeesh Babu Nanubolu, R. Sunitha Rani, C. Ganesh Kumar, H. M. Meshram, Ahmed Kamal *New J. Chem.*, 2017, 41, 3745–3749.
15. "TCCA; A mild reagent for decarboxylative/dehydrogenative aromatization of tetrahydro- β -carboline: Utility in the total synthesis of norharmane, harmane, eudistomin U, I and N" Kesari Lakshmi Manasa, **Yellaiah Tangella**, Gopathi Ramu, Bathini Nagendra Babu *ChemistrySelect*, 2017, 2, 9162–9167.
16. "A facile I₂-catalyzed synthesis of imidazo[1,2-*a*]pyridines via sp³ C-H functionalization of azaarenes and evaluation of anticancer activity" Geeta Sai Mani, Siddiq Pasha Shaik, **Yellaiah Tangella**, Swarna Bale, Chandraiah Godugua, Ahmed Kamal *Org. Biomol. Chem.*, 2017, 15, 6780–6791.
17. "An efficient one-pot approach for the regio- and diastereoselective synthesis of trans-dihydrofuran derivatives: cytotoxicity and DNA-binding studies" **Yellaiah Tangella**, Kesari Lakshmi Manasa, V. Lakshma Nayak, Manda Sathish, B. Sridhar, Abdullah Alarifi, Narayana Nagesh, Ahmed Kamal *Org. Biomol. Chem.*, 2017, 15, 6837–6853.
18. "Diphenylphosphoryl azide (DPPA)-mediated one-pot synthesis of oxazolo[4,5-*c*][1,8]naphthyridin-4(5*H*)-ones, oxazolo[4,5-*c*]quinoline-4(5*H*)-ones, and tosyloxazol-5-yl pyridines" **Yellaiah Tangella**, Kesari Lakshmi Manasa, Manda Sathish, Abdullah Alarifi, Ahmed Kamal *Asian J. Org. Chem.*, 2017, 6, 898–906.
19. "Phenyliodonium diacetate mediated one-pot synthesis of benzimidazoles and quinazolinones from benzylamines" **Yellaiah Tangella**, Kesari Lakshmi Manasa, Manda Sathish, Abdullah Alarifi and Ahmed Kamal *ChemistrySelect*, 2016, 1, 2895–2899.
20. "PhI(OAc)₂-mediated one-pot oxidative decarboxylation and aromatization of tetrahydro- β -carboline: synthesis of norharmane, harmane, eudistomin U and eudistomin I" **Yellaiah Tangella**, Kesari Lakshmi Manasa, Manda Sathish, Vunnam Srinivasulu, Jadala Chetna Abdullah Alarifi, Ahmed Kamal *Org. Biomol. Chem.*, 2015, 13, 8652–8662.
21. "An efficient one-pot decarboxylative aromatization of tetrahydro- β -carboline by using *N*-chlorosuccinimide: Total synthesis of norharmane, harmane and eudistomins" Manda Sathish, A. V. G. Prasanthi, Jadala Chetna, **Yellaiah Tangella**, Vunnam Srinivasulu, Nagula Shankaraiah, Abdullah Alarifi, Ahmed Kamal *RSC Adv.*, 2015, 5, 90121–90126.
22. "Design and synthesis of dithiocarbamate linked β -carboline derivatives: DNA topoisomerase II inhibition with DNA binding and apoptosis inducing ability" Manda Sathish, V. Lakshma Nayak, Vunnam Srinivasulu, Botla Kavitha, **Yellaiah Tangella**, Dinesh Thummuri, Chandrakant Bagul, Nagula Shankaraiah, Narayana Nagesh, Ahmed Kamal *Bioorg. Med. Chem.*, 2015, 23, 5511–5526.
23. "Palladium-catalyzed aryl C-H activation and tandem ortho-hydroxylation/alkoxylation of 2-aryl benzimidazoles: cytotoxicity and DNA-binding studies" Vunnam Srinivasulu, Manda Sathish, **Yellaiah Tangella**, V. Lakshma Nayak, M. P. Narasimha Rao, Nagula Shankaraiah, Narayana Nagesh, Ahmed Kamal *Asian J. Org. Chem.*, 2014, 3, 68–76.
24. "Asymmetric Michael addition of ketones to nitroolefins: pyrrolidinyl-oxazole-carboxamides as new efficient organocatalysts" Manda Sathish, Vunnam Srinivasulu, Jadala Chetna, Kunta Chandra Shekar, Shalini Nekkanti, **Yellaiah Tangella**, Nagula Shankaraiah, Ahmed Kamal *Org. Biomol. Chem.*, 2014, 12, 8008–8018.

List of Articles under Communication or Preparation

25. "Design and synthesis of heteropolyquinanes: A brief review" **Yellaiah Tangella**, Ramakrishna Reddy Keesari, Sambasivarao Kotha (**Under communication**).
26. "A facile approach to polyquinanes and its hetero analogues" **Yellaiah Tangella**, Sambasivarao Kotha (**Under preparation**).

Book Chapter

27. "Design and synthesis of spirocycles via olefin metathesis" Sambasivarao Kotha, Vikas R. Aswar, **Yellaiah Tangella** 2022, **Spiro Compounds: Synthesis and Applications**, 65-101.

Conference and Presentations

- "An efficient and mild approach to the synthesis of oxazolo[4,5-*c*][1,8]naphthyridin-4(5*H*)-ones and oxazolo[4,5-*c*]quinoline-4(5*H*)-ones" **Yellaiah Tangella**, Kesari Lakshmi Manasa, Manda Sathish, Jadala Chetna and Ahmed Kamal; Poster and abstract presented at 21st **International Conference on Organic Synthesis (ICOS 21)**, Organized by IIT Bombay, India, from 11-16th December-2016.
- "Phenylidoniumdicetate-mediated one-pot oxidative decarboxylation and aromatization of tetrahydro- β -carboline: Utility in a total synthesis of norharmane, harmane, eudistomin U and I" **Yellaiah Tangella**, Kesari Lakshmi Manasa, Manda Sathish, Jadala Chetna and Ahmed Kamal; Poster and abstract presented at National Conference on **Affordable Cancer Therapeutics (ACT)**, held at CSIR-IICT, Hyderabad from 4-5th April, 2016.
- Attended National Conference on **Innovative Processes for Bulk Drugs (IPBD)**, Organized by NIPER Hyderabad, on 26-27 March 2015.
- Attended International Conference on **Nature Inspired Initiatives in Chemical Trends (NIICT)**, Organized by CSIR-IICT Hyderabad, on 19-20 September 2016.
- Attended Conference on National Conference on **Science and Technology for National Development (104th Indian Science congress)**, Organized by Sri Venkateswara University, Tirupati, from 3-7th January- 2017.

Personal Information

Date of Birth: 10th June 1986

Nationality: Indian

Marital Status: Married

Present Address: S/o Venkateswarlu, Thanagampadu (Village and Post), Khammam Rural (Mandal), Khammam, Telangana, India-507003.

References

1. **Prof. Sambasivarao Kotha**, Department of Chemistry, Indian Institute of Technology Bombay, Powai, Mumbai-400076, Maharashtra, India. Tel: +91-22-25764166 Mobile: +919869392696 Email: srk@chem.iitb.ac.in
2. **Dr. Bathini Nagendra Babu**, Senior Scientist, Fluoro-Agro Chemicals, Centre for Semiochemicals, CSIR-Indian Institute of Chemical Technology, Hyderabad-500007, Telangana, India, Tel: +91-40-27191892, Mobile: +919052328050, Email: bathini@iict.res.in
3. **Dr. Ahmed Kamal**, Former Outstanding Scientist and Head of Medicinal Chemistry & Pharmacology Division, CSIR-Indian Institute of Chemical Technology, Hyderabad-500007, Telangana, India. Senior Professor Emeritus, Birla Institute of Technology & Science Hyderabad Campus, Hyderabad, India. Mobile: +919440802784, E-mail: ahmedkamal915@gmail.com

4. **Dr. Narayana Nagesh**, Senior Principal Scientist, Medical Biotechnology, CSIR-Centre for Cellular and Molecular Biology (CCMB), Hyderabad, Telangana, India, Phone: + 91 40 27192568 (Off), Mobile: +919676521308, E-mail: nagesh@ccmb.res.in

Research contribution to the synthesis of diverse small carbocyclic and heterocyclic compounds

