Name	**Dr. Christophe Tratrat**		
Specialization	Pharmaceutical Chemistry		
Current Position	Associate Professor		
Contact email (Official)	ctratrat@kfu.edu.sa		
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Academic Qualifications

Degree/year/university/country	**1999***, **Doctorate in Chemistry***, Université René Descartes, Faculty of Pharmacy, Paris V, France
Degree/year/university/country	***1996, Magistére in Medicinal Chemistry*** (Licence, Maîtrise, DEA, Research) Ecole Normale Supérieure de Paris et Université de Pierre et Marie Curie, Paris VI, France

Teaching Experience

Since 2021 **Associate Professor**, King Faisal University, Saudi Arabia

2013-2021 **Assistant Professor**, King Faisal University, Saudi Arabia

2010- 2013 **Assistant Professor**, Umm Al-Qura University, Saudi Arabia

2004- 2010 **Assistant Professor,** Notre Dame University, Lebanon

2003-2004 **Assistant Professor** (Part-time), Lebanese American University, Notre Dame University and Balamand University, Lebanon

2001-2003 **Assistant Professor**, University of Clermont-Ferrand, France

2000- 2001 **Associate Research**, Imperial College, London, England

Courses Taught and Teaching in KFU

- 2010112 : Pharmaceutical Organic Chemistry-1
- 2010123 : Pharmaceutical Organic Chemistry-2
- 2010313 : Medicinal Chemistry-3
- 2010323 : Principles of Drug Design
- 2010612 : Pharmaceutical Chemistry

Research Interests

1. Design and synthesis of novel heterocyclic compounds as anticancer, antibacterial and anti-inflammatory agents
2. Multi-step organic syntheses at the forefront of the discovery of active compounds
3. Computer-aided molecular modeling drug design

Research Grants Received

1. Preparation and development through computer-aided molecular drug design of isoxazolidine nucleosides, and isoxazolidinyl and nucleosidyl podophyllotoxin derivatives with potential antiviral and anticancer activities. KACST, Co-I, March 2011.

2. Rational development of novel ellipticines that target p53 deficiency by activation of p73 and their delivery using nanotechnology for cancer therapy. KACST, Co-I, September 2011**.**
3. Design, synthesis and biological evaluation of novel psorospermin analogs that rely on topoisomerase II-directed alkylation of DNA and activity against drug-resistant tumors. KACST, Co-I, March 2012.
4. Thiazole-based chalchones and thiazole-based thiazolidinones as potent antimicrobial agents. Design, synthesis and biological evaluation. DSR, 2014
5. Design, synthesis and cytotoxic evaluation of novel aza-podophyllotoxin analogues as potential anticancer agents. DSR, 2014
6. Molecular Modeling Screening, Synthesis and Antidiabetic Evaluation of New Thiazolidinedione Analogues As Potential Antidiabetic Type 2 Agents. DSR, 2015
7. Design, synthesis and biological evaluation of thiazole derivatives with dual anti-inflammatory and antimicrobial activity. DSR, 2015
8. Design, synthesis and pharmacological evaluation of novel thiazole-based thiazolidinones as potent anti-inflammatory and antimicrobial agents. DSR, 2017
9. Computer Drug Design, Synthesis and Pharmacological Evaluation of Novel Potent Hybrids of the type chalcone-thiazole and Thiazolidinone-thiazole as Dual Anti-inflammatory and Antimicrobial Activity- DSR, 2019

Publications

1. A convenient route to quinolone-fused imides and lactams: synthesis of pyrrolo[3,4-β]quinoline-3,9-diones and 1,3,9-triones by oxydation of indole derivatives. C. Tratrat, S. Giorgi-Renault, H.-P. Husson, *Synlett,* **1998**, 1071.
2. Oxidative cleavage of indole-δ-lactones with *m*-chloroperbenzoic acid: First Synthesis of Spiroindoline-2-one-γ-lactones. C. Tratrat, S. Giorgi-Renault, H.-P. Husson, *J. Org. Chem.,* **2000**, 65, 6773.
3. Palladium-Catalyzed N-arylation of Tetrahydroquinoline and Tetrahydroisoquinoline with Arylhalides. J. MeneyrolL, P. Helissey, C. Tratrat, S. Giorgi-Renault, H.-P. Husson, *Synthetic Communications*, **2001**, *31*, 987.
4. New tricyclic quinoline derivatives useful as anticancer agents, H.-P. Husson, S. Giorgi-Renault, C. Tratrat, G. Atassi, A. Pierre, P. Renard, B. Pfeiffer.
   FR 2801310 May 2001; EP 1103554 May 2001; JP 2001151756 June 2001; KR 10200000070290 June 2001; HK 1036983 January 2002; US 6548515 April 2003; CA 2326710 June 2006.
5. A Multicomponent Reaction for the One-Pot Synthesis of 4-aza-2,3-dehydropodophyllotoxin and derivatives. C. Tratrat, S. Giorgi-Renault, H.-P. Husson, *Organic Letters*, **2002**, *19*, 3187.
6. β'-Ketoamino ester as valuable tool for the asymmetric construction of substituted homopipecolic esters. Application to a synthesis of (+)-Calvine. S. Rougnon-Glasson, C. Tratrat, J.-L. Canet, P. Chalard, Y. Troin, *Tetrahedron Asymmetry*, **2004**, 1562.
7. New Approach of Ethyl Substituted Isoquinoline-3 Carboxylate Synthesis Michelyne Haroun, Mohamad Abdul-Ghani, Christophe Tratrat, *Jordan Journal of Chemistry,* **2009**, *4*, 325.
8. Molecular modeling design, synthesis and cytotoxic evaluation of certain substituted 2-(3,4,5-triacetoxybenzoylamino)benzo[d]thiazole and 2-(galloylamino)benzo[d]thiazole derivatives having potential topoisomerase-I inhibitory activity. Mohamed A.H. Ismail, Christophe Tratrat. Michelyne Haroun. *Journal of Enzyme inhibition and Medicinal Chemistry*, **2012**. 28(6), 1331-1345

9. Thiazole-based thiazolidinones as potent antimicrobial agents. Design, synthesis and biological evaluation. Michelyne Haroun, Tratrat Christophe, Geronikaki Athina, *Combinatorial Chemistry & High Throughput Screening,* **2016**, 19(1), 51-57.
10. Design, synthesis and biological evaluation of new substituted 5-benzylideno-2-Adamantylthiazol [3,2-b][1,2,4]triazol-6(5*H*)ones. Pharmacophore models for antifungal activity, C. Tratrat, M. Haroun, A. Paparisva, A. Geronikaki, Ch. Kamoutsis, A. Ćirić, J. Glamočlija, M. Soković, Ch. Fotakis, P. Zoumpoulakis, Shome S. Bhunia, Anil K. Saxena, *Arabian Journal of Chemistry*, **2018**, 11, 573-590.
11. New Benzothiazole-based Thiazolidinones as Potent Antimicrobial Agents. Design, synthesis and Biological Evaluation, Michelyne Haroun, Christophe Tratrat, Katerina Kositsi, Anthi Petrou, Bandar Al-Dhubiab, Mahesh Attimarad, Sree Harsha, Heba S. Elsewedy ,Athina Geronikaki, Marina Sokovic, Jasna Glamoclija and Ana Ciric, *Current Topics in Medicinal Chemistry*, **2018**, 18, 1-13.
12. Efficient Synthesis and Characterization of Novel Indolizines: Exploration of *in Vitro* COX-2 Inhibitory Activity and Molecular Modelling Studies**,** Sandeep Chandrashekharappa, Katharigatta N. Venugopala, Christophe Tratrat, Bandar E. Aldhubiab, Michelyne Haroun, Rashmi Venugopala, Rashmi S. Kulkarni, Mahesh V. Attimarad, Sree Harsha and Bharti Odhav, *New Journal of Chemistry*, **2018**, 42 (7).
13. 5-Adamantan Thiadiazole-based Thiazolidinones as Antimicrobial Agents. Design, Synthesis, Molecular Docking and Evaluation**,** Maria Fesatidou, ,Panagiotis Zagaliotis, Charalampos Camoutsis, Anthi Petrou, Phaedra Eleftheriou, Christophe Tratrat, Micheline Haroun, Athina Geronikaki, Ana Ciric, *Bioorganic & Medicinal Chemistry,* **2018**, *26*, 4664-4676
14. Design, synthesis, evaluation of antimicrobial activity and docking studies of new thiazole-based chalcones**,** Christophe Tratrat, Michelyne Haroun, Iakovos Xenikakis, Evangelia Tsolaki, Phaedra, Eleftheriou, Anthi Petrou, Bandar Aldhubiab, Mahesh Attimarad, Katharigatta N. Venugopala, Sree Harsha, Heba S. Elsewedy, Athina Geronikaki, *Current Topics in Medicinal Chemistry,* **2019**, 19, 1-20.
15. Anti-Tubercular Activity of Substituted 7-Methyl and 7-Formylindolizines and In Silico Study for Prospective Molecular Target Identification, KN Venugopala, C. Tratrat, M Pillay, FM Mahomoodally, S Bhandary, M. Haroun, Antibiotics, **2019**, 8 (4), 247.
16. Anti-tubercular potency and computationally-assessed drug-likeness and toxicology of diversely substituted indolizines, KN Venugopala, C. Tratrat, S Chandrashekharappa, M Attimarad, M. Haroun, Indian J. Pharma. Educ. **2019**, Res 53, 545-552.
17. 1, 2, 4-Triazole: A Privileged Scaffold for the Development of Potent Antifungal Agents-A Brief Review, C. Tratrat, Current topics in medicinal chemistry, **2019**, 20 (24), 2235-2258.
18. An Efficient, Lung-Targeted, Drug-Delivery System To Treat Asthma Via Microparticles, N SreeHarsha, KN Venugopala, AB Nair, TS Roopashree, M Attimarad, C. Tratrat, M. Haroun, Drug Design, Development and Therapy, **2019**, 13, 4389.
19. Cytotoxicity and Antimycobacterial Properties of Pyrrolo [1, 2-a] quinoline Derivatives: Molecular Target Identification and Molecular Docking Studies,KN

Venugopala, V Uppar, S Chandrashekharappa, HH Abdallah, M Pillay, C. Tratrat, M. Haroun,Antibiotics **2020**, 9 (5), 233.

20. In silico Design and Synthesis of Tetrahydropyrimidinones and Tetrahydropyrimidinethiones as Potential Thymidylate Kinase Inhibitors Exerting Anti-TB Activity Against Mycobacterium tuberculosis, Katharigatta N Venugopala, Christophe Tratrat, Melendhran Pillay, Sandeep Chandrashekharappa, Omar Husham Ahmed Attraqchi, Bandar E Aldhubiab, Michelyne Haroun, Hezekiel M Kumalo, Drug Design, Development and Therapy, **2020**, 14, 1027–1039.
21. Larvicidal Activities of 2-Aryl-2,3-Dihydroquinazolin -4-ones against Malaria Vector Anopheles arabiensis, In Silico ADMET Prediction and Molecular Target Investigation, KN Venugopala, V Uppar, S Chandrashekharappa, HH Abdallah, M Pillay, C. Tratrat, M. Haroun, Molecules, **2020**, 25 (6), 1316.
22. Novel Thiazole-Based Thiazolidinones as Potent Anti-infective Agents: In silico PASS and Toxicity Prediction, Synthesis, Biological Evaluation and Molecular Modelling, C. Tratrat; Combinatorial Chemistry & High Throughput Screening, **2020**, 23 (2), 126-140.
23. Synthesis, characterization, and biological activity of silver nanoparticles synthesized from Aristolochia bracteolata lam. N Sreeharsha, G Kathiravan, K Rajagopal, A Rajasekar, B Rajangam, C. Tratrat, M. Haroun, Pharmacognosy Magazine, **2020**, 16 (71), 568.
24. New Substituted 5-Benzylideno-2-Adamantylthiazol[3,2- b][1,2,4]Triazol-6(5H)ones as Possible Anti-Inflammatory Agents, Christophe Tratrat, Michelyne Haroun, Aliki Paparisva, Charalmpos, Molecules, **2021**, 26 (3), 659.
25. Thiazole-Based Chalcone Derivatives as Potential Anti-inflammatory Agents: Biological Evaluation and Molecular Modelling, Christophe Tratrat, Michelyne Haroun, Evangelia Tsolaki, Anthi Petrou, Current Topics in Medicinal Chemistry, **2021**, 21 (4), 257 – 268
26. Exploration of the Antimicrobial Effects of Benzothiazolylthiazolidin-4-One and In Silico Mechanistic Investigation, M Haroun, C Tratrat, A Petrou, A Geronikaki, M Ivanov, A Ćirić, M Soković, Molecules , **2021**, 26 (13), 4061.
27. Anti-tubercular activity and molecular docking studies of indolizine derivatives targeting mycobacterial InhA enzyme, KN Venugopala, S Chandrashekharappa, PK Deb, C Tratrat, M Pillay, M. Haroun, Journal of Enzyme Inhibition and Medicinal Chemistry, **2021**, 36 (1), 1472-1487.
28. Crystallography, Molecular Modeling, and COX-2 Inhibition Studies on Indolizine Derivatives, KN Venugopala, S Chandrashekharappa, C. Tratrat, PK Deb, M. Haroun, Molecules, **2021**, 26 (12), 3550.
29. Recent Advances in the Development of 1, 2, 3-T,riazole-Containing Derivatives as Potential Antifungal Agents Inhibitors of Lanosterol 14α-Demethylase, M Haroun, C Tratrat, H Kochkar, AB Nair, Current Topics in Medicinal Chemistry, **2021**, 21(6):462-506.
30. 5-Benzyliden-2-(5-Methylthiazol-2-Ylimino) Thiazolidin-4-Ones as Antimicrobial Agents. Design, Synthesis, Biological Evaluation and Molecular Docking Studies, M Haroun, C Tratrat, A Kolokotroni, A Petrou, A Geronikaki, M Ivanov, Antibiotics, **2021**, 10 (3), 309
31. 2-Aryl-3-(6-trifluoromethoxy)benzo[d]thiazole-based thiazolidinone hybrids as potential anti-infective agents: Synthesis, biological evaluation and molecular

docking studies, Michelyne Haroun, Christophe Tratrat, Anthi Petrou, Athina Geronikki, Bioorganic & Medicinal Chemistry Letters **2021**, 32:127718.

32. 1,2,3-Triazolyl-tetrahydropyrimidine Conjugates as Potential Sterol Carrier Protein-2 Inhibitors: Larvicidal Activity against the Malaria Vector *Anopheles arabiensis* and In Silico Molecular Docking Study *opheles arabiensis* and In Silico Molecular Docking Study**,** Katharigatta N. Venugopala, Pottathil Shinu, Christophe Tratrat, Sandeep Chandrashekharappa, Deepak Chopra, Mahesh Attimarad, Anroop B. Nair, Nagaraja Sreeharsha, Fawzi M. , Michelyne Haroun**,** Molecules, **2022**, 27, 2676.
33. Significant of injectable brucine PEGylated niosomes in treatment of MDA cancer cells, Michelyne Haroun, Heba S.Elsewedy, Tamer M.Shehata, ChristopheTratrat, Bandar E.Al Dhubiab, Katharigatta N.Venugopala, Mervt M.Almostafa, Hafedh Kochkar, Hanan M.Elnahas, Journal of Drug Delivery Science and Technology, 71, **2022**, 71, 103322.
34. Thiazolidin-4-ones as Potential Antimicrobial Agents: Experimental and In Silico Evaluation, Christophe Tratrat, Anthi Petrou, Athina Geronikaki, Marija Ivanov, Marina Kostić, Marina Soković, Ioannis S Vizirianakis, Nikoleta F Theodoroula, Michelyne Haroun, Molecules, **2022**, 27(6), 1930.
35. Enhancement of the photocatalytic response of Cu-doped TiO2 nanotubes induced by the addition of strontium, W Alrashedi, H Kochkar, G Berhault, M Younas, A Ben Ali, NA Alomair, R Hamdi, SA Abubshait, O Alagha, MF Gondal, M Haroun, C Tratrat, Journal of Photochemistry and Photobiology A: Chemistry, **2022**, 428, 113858
36. Exploring the potential of flavonoids as efflorescing antidiabetic: An updated SAR and mechanistic based approach, KN Venugopala, J Chaudhary, V Sharma, A Jain, M Kumar, M Haroun, C Tratrat, D Sharma, Pharmacognosy Magazine, **2022**, 791
37. Antitubercular, Cytotoxicity, and Computational Target Validation of Dihydroquinazolinone Derivatives, KN Venugopala, NA Al-Shar'i, LA Dahabiyeh, W Hourani, M Haroun, C. Tratrat, PK Deb, Antibiotics, **2022**, 11 (7), 831
38. 1, 5-Benzothiazepine Derivatives: Green Synthesis, In Silico and In Vitro Evaluation as Anticancer Agents, M Haroun, SS Chobe, RR Alavala, SM Mathure, C. Tratrat, RN Jamullamudi, Molecules, **2022**, 27 (12), 3757.
39. Environmental sustainable mathematically processed UV spectroscopic methods for quality control analysis of remogliflozin and teneligliptin: Evaluation of greenness and whiteness, M Attimarad, KN Venugopala, AB Nair, N Sreeharsha, EIIP Molina, C. Tratrat, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, **2022**, 278, 121303.
40. Discovery of benzothiazole-based thiazolidinones as potential anti-inflammatory agents: anti-inflammatory activity, soybean lipoxygenase inhibition effect and molecular docking studies, M Haroun, A Petrou, C Tratrat, K Kositsi, A Gavalas, A Geronikaki, SAR and QSAR in Environmental Research, **2022**, 33 (6), 485-497.
41. An Experimental Design Approach to Quantitative Expression for Quality Control of a Multicomponent Antidiabetic Formulation by the HILIC Method, M Attimarad, KN Venugopala, MS Chohan, M David, EII Molina, C Tratrat, Molecules, **2022**, 27 (10), 3135.
42. Antitubercular, Cytotoxicity, and Computational Target Validation of Dihydroquinazolinone Derivatives, KN Venugopala, NA Al-Shar'i, L A Dahabiyeh, W Hourani, P K Deb, M Pillay, BAbu-Irmaileh, Y Bustanji, S Chandrashekharappa,

C Tratrat, M Attimarad, A B Nair, N Sreeharsha, P Shinu, M Haroun, M Kandeel, A A Balgoname, R Venugopala, M A Morsy, Antibiotics, **2022**, 11 (7), 831

43. Discovery of 5-Methylthiazole-Thiazolidinone Conjugates as Potential Anti-Inflammatory Agents: Molecular Target Identification and In Silico Studies, M Haroun, A Petrou, C Tratrat, A Kolokotroni, M Fesatidou, P Zagaliotis, A Gavalas, KN Venugopala, N Sreeharsha, A B Nair, HS Elsewedy, A Geronikaki, Molecules, **2022**, 27 (23), 8137
44. Identification of Novel Cyclooxygenase-1 Selective Inhibitors of Thiadiazole-Based Scaffold as Potent Anti-Inflammatory Agents with Safety Gastric and Cytotoxic Profile, M Haroun, M Fesatidou, A Petrou, C Tratrat, P Zagaliotis, A Gavalas, KN Venugopala, H Kochkar, P M Emeka, NS Younis, DA Elmaghraby, MM Almostafa, MS Chohan, I Vizirianakis, A Papadimitriou-Tsantarliotou, A Geronikaki, Molecules, **2023**, 28 (8), 3416
45. Benzothiazole as a promising scaffold for the development of antifungal agents, C Tratrat, Current Topics in Medicinal Chemistry, **2023**, 23 (7), 491-519
46. 5-Membered Heterocyclic Compounds as Antiviral Agents, C Tratrat, A Petrou, M Fesatidou, M Haroun, G Athina, K Venugopala, N Sreeharsha, J Chemali, Current Topics in Medicinal Chemistry, **2023**, 23 (7), 520-538
47. Synthesis, biological evaluation, and computational investigation of ethyl 2,4,6-trisubstituted-1,4-dihydropyrimidine-5-carboxylates as potential larvicidal agents against *Anopheles arabiensis,* R Duraisamy, NA Al-Shar'i, SChandrashekharappa, PK Deb, RM Gleiser, C Tratrat, D Chopra, MR M Bhojegowd, D Thirumalai, MA Morsy, YF Ibrahim, V Mohanlall, KN Venugopala, Journal of Biomolecular Structure and Dynamics, **2024**, 42 (8), 4016-4028
48. Identification of potent indolizine derivatives against Mycobacterial tuberculosis: In vitro anti-TB properties, in silico target validation, molecular docking and dynamics studies**,** Katharigatta N Venugopala , Sandeep Chandrashekharappa , Pran Kishore Deb , Nizar A Al-Shar'i , Melendhran Pillay , Priya Tiwari , Deepak Chopra , Pobitra Borah , Rasoul Tamhaev , Lionel Mourey , Christian Lherbet , Bandar E Aldhubiab , Christophe Tratrat, Mahesh Attimarad, Anroop B Nair, Nagaraja Sreeharsha, Raghu Prasad Mailavaram, Rashmi Venugopala, Viresh Mohanlall, Mohamed A Morsy**,** Int J Biol Macromol., **2024**; 274(Pt 2):133285

Presentations And abstracts

- Ninth fechem Conference on Heterocycles in Bio-Organic Chemistry, Aussois. May 1998
  A convenient route to quinolone-fused imides and lactams: synthesis of pyrrolo[3,4-β]quinoline-3,9-diones and 1,3,9-triones by oxydation of indole derivatives.
- 35th International Meeting on Medicinal Chemistry. Rouen, France. July 1999
  Synthesis and reactivity studies of pyrroloquinolines: pyrrolo[3,4-b]quinoline-1,3,9-triones, 1,9-diones and 3,9-diones.
- 37th International Meeting on Medicinal Chemistry. Tours, France. July 2001
  Les 4-azapodophyllotoxines: nouvelles molécules à forte activité antitumorale, inhibitrices de la polymérisation de la tubuline.
- 17th French-Japanese Symposium on Medicinal and Fine Chemistry. Tohoku University, May 2004
  A-Ketoamino ester as valuable tool for the asymmetric construction of Homopipecolic esters.

	➢ 11th IBN SINA International Conference on Pure and Applied Heterocyclic Chemistry, Faculty of Science and Faculty of Pharmacy, Ain Shams University, Cairo,13-16, December 2008 Efficient Synthesis of Ethyl 1,4-Disubstituted Isoquinoline-3-Carboxylate by Regioselective Cross-Coupling Reactions. ➢ The Fourth International Chemistry Conference, King Saud University, KSA, November 2011 Synthesis and Biological Evaluation of New Aromathecin Analogues. ➢ International Conference on Global Trends in Pure and Applied Chemical Sciences, Udaipur (Rajasthan) India, March 2012 Design, Synthesis and Antitumor Evaluation of New Camptothecin Analogues ➢ 33rd National Medicinal Chemistry Symposium, Faculty of Pharmacy, University of Arizona, Tucson, May 2012. A Novel Series of Aromathecins as Antitumor Agents. ➢ 3rd International Summit on GMP, GCP & Quality Control, Valencia, Spain, Sept., **2014**., Molecular modeling design, synthesis and antihyperglycemic evaluation of certain 5-(arylalkoxy-benzylidine)-imidazolidine-2,4-dione derivatives as potential PPARg agonists ➢ 3rd International Conference on Medicinal Chemistry & Computer Aided Drug Designing, San Francisco, USA, Dec., **2014**, Molecular modeling design, synthesis and antihyperglycemic evaluation of certain 5-(arylalkoxy-benzylidine)-imidazolidine-2,4-dione derivatives as potential PPAR-γ agonists
Workshops / Seminars attended	➢ Designing Courses that Motivate & Engage Students for Deep Learning, Feb. 2014. ➢ Web of Sciences & EndNote 1 Training Workshop, Dec. 2015. ➢ EndNote Workshop, Feb. 2016. ➢ Student Advising & Integrating Soft Skills in Teaching and Learning, Apr. 2016. ➢ Developing Faculty Evaluation Systems Workshop in Cooperation with British Council, Dec. 2016. ➢ Data analysis Techniques for publishing in high impact factor journals, March 2021 ➢ Language Skills in Writing Scientific Papers, December, 2023