10. Appendixes

List of publications

From Thesis:

- **G George***, P Auti, AT Paul. (2021). Design, synthesis and biological evaluation of *N*-substituted indole-thiazolidinedione hybrid analogues as potential pancreatic lipase inhibitors. *Chemical Biology and Drug Design,* 00, 1-11 {**Journal Publication; Impact factor- 2.817**}
- **G George**, P Auti, AT Paul (2020). Design, synthesis, in silico molecular modelling studies and biological evaluation of novel indole-thiazolidinedione hybrid analogues as potential pancreatic lipase inhibitors. *New Journal of Chemistry,* 45 (3), 1381-1394 {**Journal Publication; Impact factor- 3.591**}
- **G George**, Dileep P.S, AT Paul (2019). Development and validation of a new HPTLC-HRMS method for the quantification of a potent pancreatic lipase inhibitory lead Echitamine from *Alstonia scholaris*. *Natural Product Research,* 1-5 {**Journal Publication; Impact factor- 2.861**}
- AT Paul, **G. George**, N. Yadav, A. Jeswani, and PS Auti (2021). "*Pharmaceutical Application of Bio-actives from Alstonia Genus: Current Findings and Future Directions*" in Book titled "*Bioactive Natural Products for Pharmaceutical Applications*", Advanced Structured Materials 140, Editors: D. Pal and A. K. Nayak. Published by Springer Nature Switzerland AG 2021 (10.1007/978-3-030-54027-2_14) {**Book chapter**}
- SNC Sridhar, **G Ginson**, A Verma, AT Paul (2019). Chapter 6: Natural Products-Based Pancreatic Lipase Inhibitors for Obesity Treatment in Book titled "*Natural Bioactive compounds: Production and Applications: Volume 1*". Editors: MS Akhtar, MK Swamy and UR Sinniah. Published by Springer Singapore {**Book chapter**}
- AT Paul, **G. George**, P Sengupta, PS Auti. 'Thiazolidinedione-Indole Compounds' filed at Indian Patent Office (202011049372) dated 12th November 2020 {**Provisional patent application**}
- AT Paul, **G. George**, SNC Sridhar, P Sengupta. 'Pharmaceutical Compositions for Treating Obesity' filed at Indian Patent Office (Application No: 202011024478) dated 11th June 2020 {**Patent application**}

- Design, synthesis and pancreatic lipase inhibition activities of new indole-thiazolidinedione hybrids {**Ready for communication**}
- Design, synthesis and pancreatic lipase inhibition activities of thiazolidinedione appended bisindole hybrid analogues {**Ready for communication**}

Other publications:

Journal Publication

- P Auti*, **G George***, AT Paul (2020). Recent advances in the pharmacological diversification of quinazoline/quinazolinone hybrids. *RSC Advances*,10, 41353-41392 {**Impact factor- 3.361**}
- **G George**, SNC Sridhar, AT Paul (2020). Investigation of anti-obesity potential of green tea polyphenols and orlistat combination using pancreatic lipase assay-based synergy directed fractionation strategy. *South African Journal of Botany*. 135,50-57 {**Impact factor- 2.315**}
- **G George**, P Sengupta, AT Paul (2020). Optimization of an extraction conditions for *Rumex nepalensis* anthraquinones and its correlation with pancreatic lipase inhibitory activity. *Journal of Food Composition and Analysis*, 92,202,103575 {**Impact factor- 4.556**}
- N Yadav, P Auti, **G George** and AT Paul (2020). Design, synthesis and biological evaluation of *O*-alkyl umbelliferone derivatives as pancreatic lipase inhibitors. *Journal Indian Chemistry Society*, 97(8),1-6
- D Chauhan, **G George**, SNC Sridhar, R Bhatia, AT Paul, V Monga (2019). Design, synthesis, biological evaluation, and molecular modelling studies of rhodanine derivatives as pancreatic lipase inhibitors. *Archiv der Pharmazie* 352 (10), 1900029 {**Impact factor- 3.751**}
- SNC Sridhar, D Bhurta, D Kantiwal, **G George**, V Monga, AT Paul (2017). Design, synthesis, biological evaluation and molecular modelling studies of novel diaryl substituted pyrazolyl thiazolidinediones as potent pancreatic lipase inhibitors. *Bioorganic & Medicinal Chemistry Letters* 27 (16), 3749-3754 {**Impact factor- 2.823**}
- SNC Sridhar, **G Ginson**, POV Reddy, MP Tantak, D Kumar, AT Paul (2017). Synthesis, evaluation and molecular modelling studies of 2-(carbazol-3-yl)-2-

oxoacetamide analogues as a new class of potential pancreatic lipase inhibitors. *Bioorganic & Medicinal Chemistry* 25 (2), 609-620. {**Impact factor- 3.641**}

***Indicated equally contributed author**

List of patents filed

- AT Paul, P. Sengupta, **G. George**, Yadav Nisha, Auti Prashant '**Compositions for Inhibiting Pancreatic Lipase'** filed at Indian Patent Office (Application No: 202011049373) dated 12th November 2020.
- AT Paul, SNC Sridhar, P. Sengupta, **G. George**, '**Indolyl Oxoacetamide Analogues as Potent Pancreatic Lipase Inhibitors**' filed at Indian Patent Office (Application No: 202011001052) dated 9th January 2020.

List of conferences attended

- Poster presentation on "***A Validated Densitometric HPTLC Method for Simultaneous Estimation of Phenylpropanoid, Phenolic and Alkaloidal Class of Compounds in Various Herbal Products"*** at 7th International Congress of Society for Ethnopharmacology", Jamia Hamdard, New Delhi (2020)
- Poster presentation on "***Development of Anti-Obesity Tea Polyphenol -Orlistat Combination by Synergy Guided Fractionation Approach"*** at 6th International Biennial Conference on "New Developments & Drug Discovery from Natural Products and Traditional Medicines", NIPER, SAS Nagar, Mohali (2018)
- Poster presentation on "***Synergy based pancreatic lipase inhibitory effects of selected Indian Medicinal Plants***" at Delhi Pharmaceutical Sciences and Research University, New Delhi (2018)
- Poster presentation on "***Antiobesity potential of selected Indian medicinal plants: A Pancreatic Lipase Inhibition based study through synergistic approach***" at 24th ISCB International Conference, Manipal University, Jaipur (2018)

List of Workshops/ Symposium attended

- Participated in four days workshop in BITS Pilani, Hyderabad campus on "**Exploring Chromatography and Mass Spectrometry-Futuristic Technologies**" organized by BITS Pilani, Hyderabad campus, Shimadzu, Spinco Biotech Pvt. Ltd During 16-19 December 2019
- Participated in Biocon BMS sponsored "**Industry-Academia Symposium on Analytical Sciences"** organized at BITS Pilani (Pilani Campus) during November 2018

Awards and Achievements

- **CSIR-SRF** from April 2019 – till now
- **Dr. P. D. Sethi Memorial National Award** (**Third Prize)** for the scientific article entitled "Development *and validation of a new HPTLC-HRMS method for the quantification of a potent pancreatic lipase inhibitory lead Echitamine from Alstonia scholaris"* in 2020.
- **Poster presentation** (**Second prize**) at 6th International Biennial Conference on "New Developments and Drug Discovery from Natural Products and Traditional Medicines" held at NIPER, S.A.S. Nagar, India during November 15-17, 2018.
- **Best poster award** at International Conference "Challenges for Global Competitiveness of AYUSH and Natural Products" organized by Delhi Pharmaceutical Sciences and Research University (New Delhi), during February 2-4, 2018.

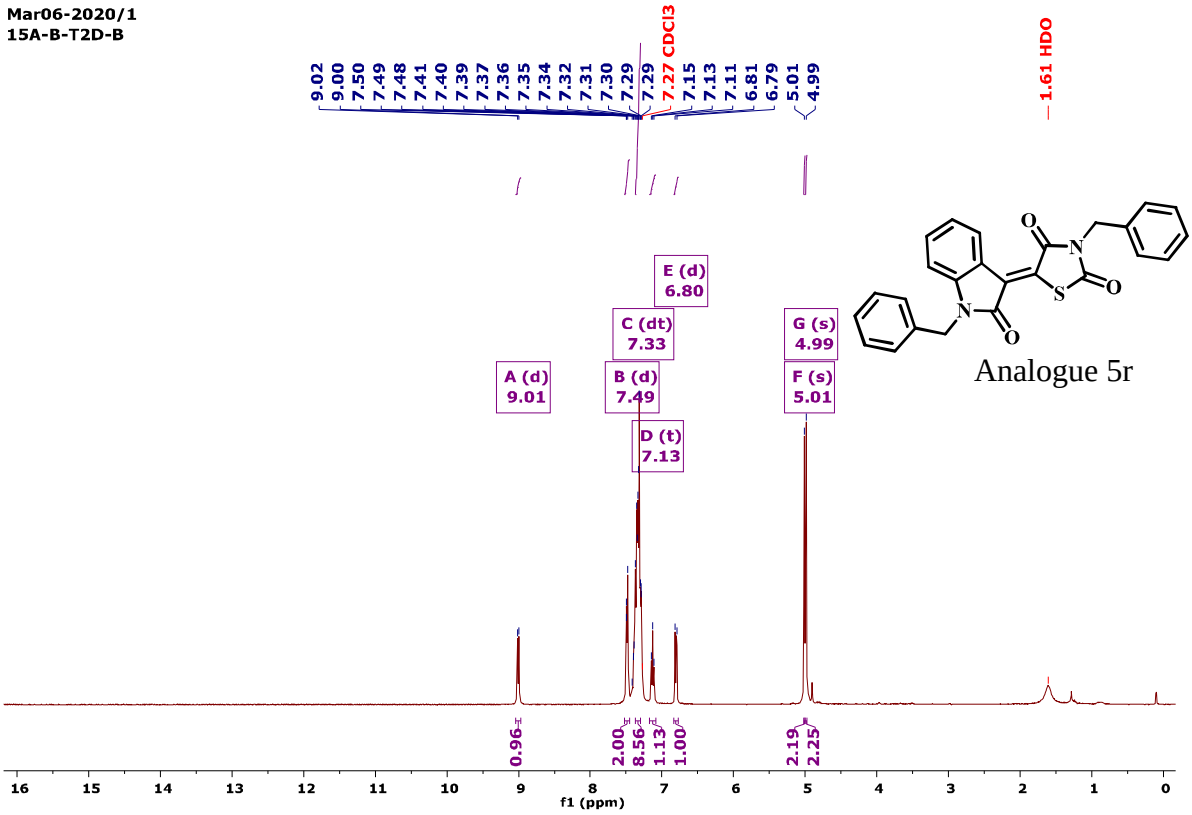
BRIEF BIOGRAPHY OF THE SUPERVISOR

Dr. Paul Atish Tulshiram is Associate Professor & Ex-Head (Department of Pharmacy). He completed his bachelor's in pharmacy from University of Pune (Maharashtra). He pursued M.S. (Pharmaceutical Sciences) and Ph.D. in Natural Products from National Institute of Pharmaceutical Education and Research (NIPER, S.A.S Nagar, Punjab). After completion of his doctorate, he joined the research group of Prof. Ikhlas Khan as Postdoctoral Research Associate at the National Center for Natural Product Research (University of Mississippi, USA). His current research interest is identification of pancreatic lipase inhibitory natural products and synthesis of their inspired analogues for obesity management. He has 03 research grants from agencies such as DST-SERB, DST (SEED), DBT, etc. and has completed 03 projects. He has published 30+ research articles in reputed international journals and has also contributed 24 official monographs on polyherbal formulations in The Ayurvedic Pharmacopoeia of India. He has guided 2 doctoral students and is currently supervising 5 doctoral candidates. He is a reviewer for various journals of reputed publishers such as ACS Elsevier, Wiley, Bentham, etc. and also for funding agencies such as DST-SERB, South African Medical Research Council, etc.

BRIEF BIOGRAPHY OF THE CANDIDATE

Ginson George is a research scholar at Department of Pharmacy, BITS Pilani, Pilani campus. He pursued his bachelor's degree (B. Pharmacy) from Malik Deenar College of Pharmacy, Kasaragod (affiliated to Kannur University, Kerala) and Master's degree (M.Pharm. in Pharmaceutical Chemistry) from the College of Pharmaceutical Sciences, Govt. Medical College, Thiruvananthapuram (affiliated to Kerala University of Health Sciences, Kerala). In January 2016, he joined Department of Pharmacy, BITS Pilani (Pilani Campus) as a PhD scholar under the supervision of Dr. Paul Atish Tulshiram and was provided with the financial assistance from DST SERB. He has also received the prestigious CSIR SRF award for the year 2019-21. He has published several articles in peer reviewed journals and delivered presentations in international and national conferences. Apart from this, some of his works are filed for patent applications.

Representative NMR Spectra



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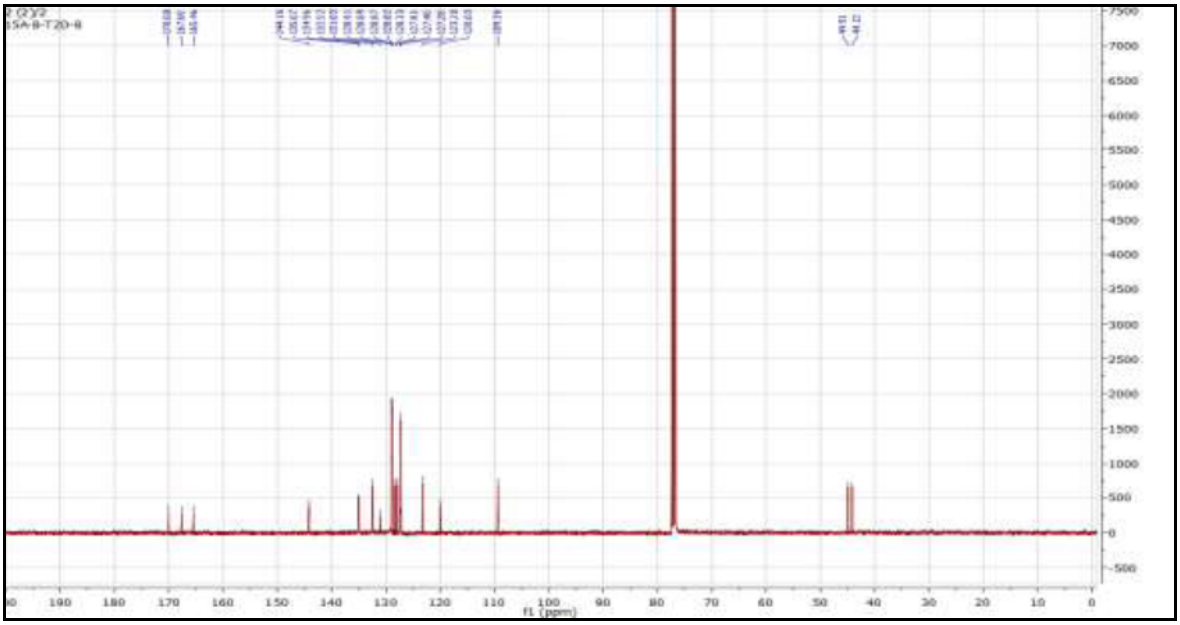

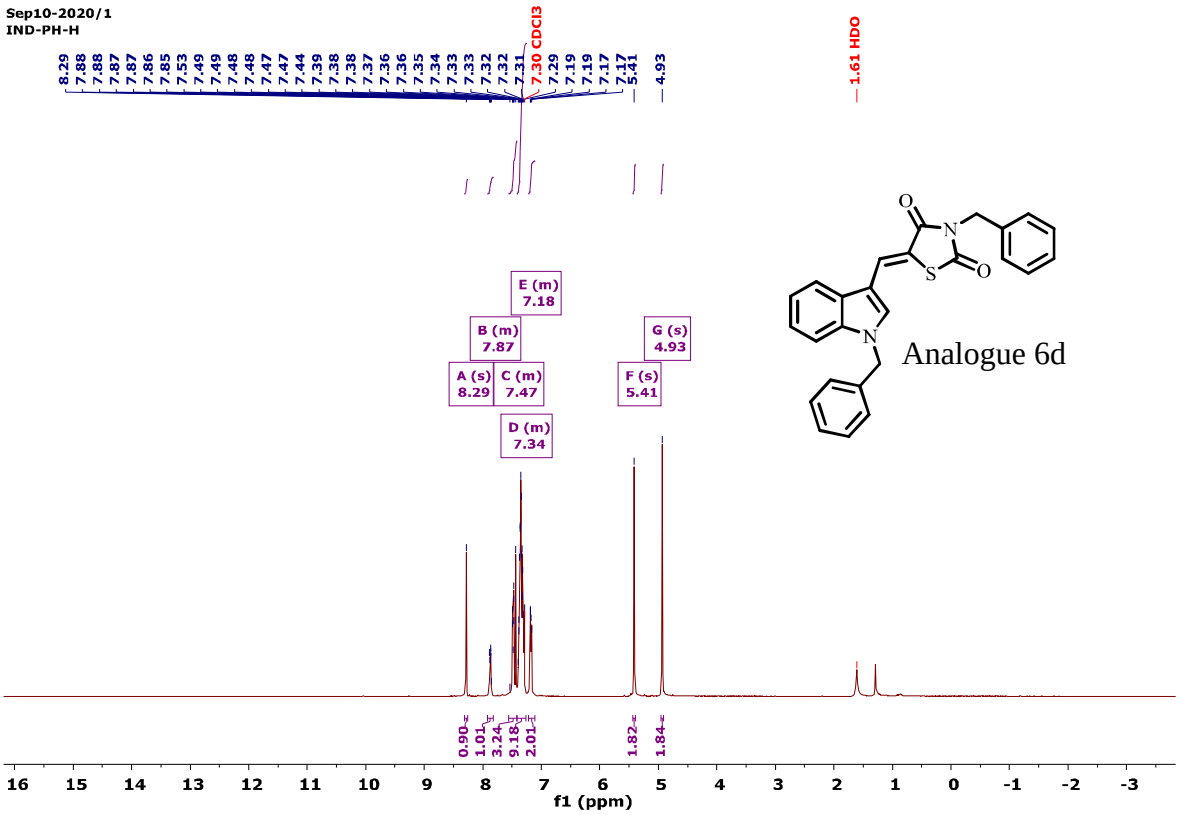
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7.17
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5.41
4.93
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A (s) 8.29
C (m) 7.47
D (m) 7.34
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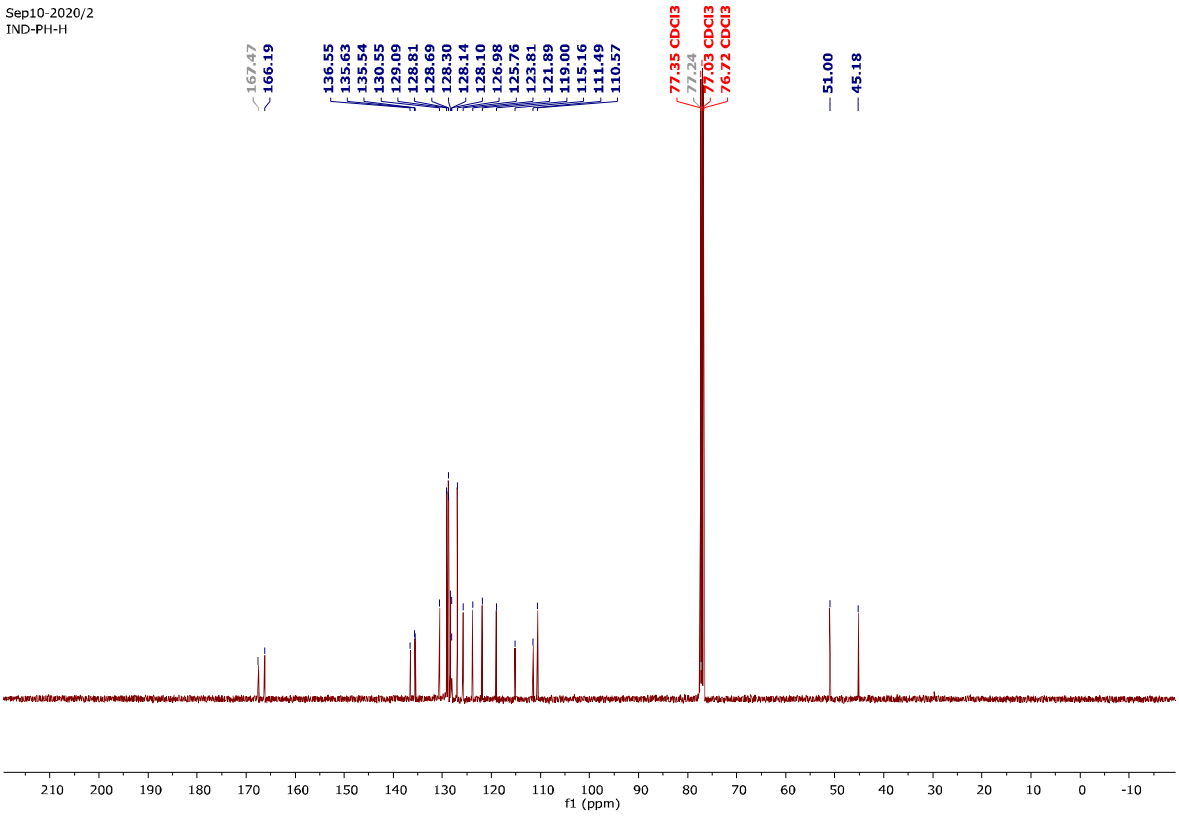
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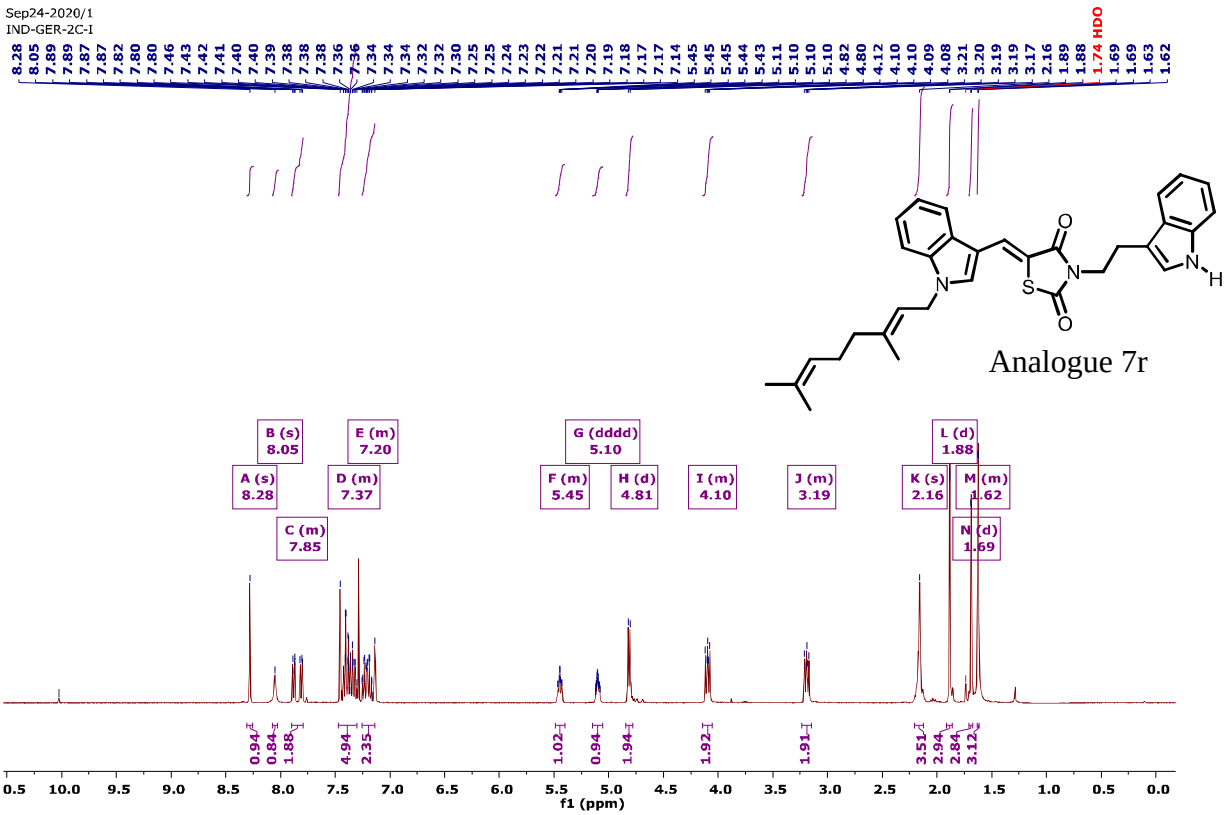
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H (d) 4.81
I (m) 4.10
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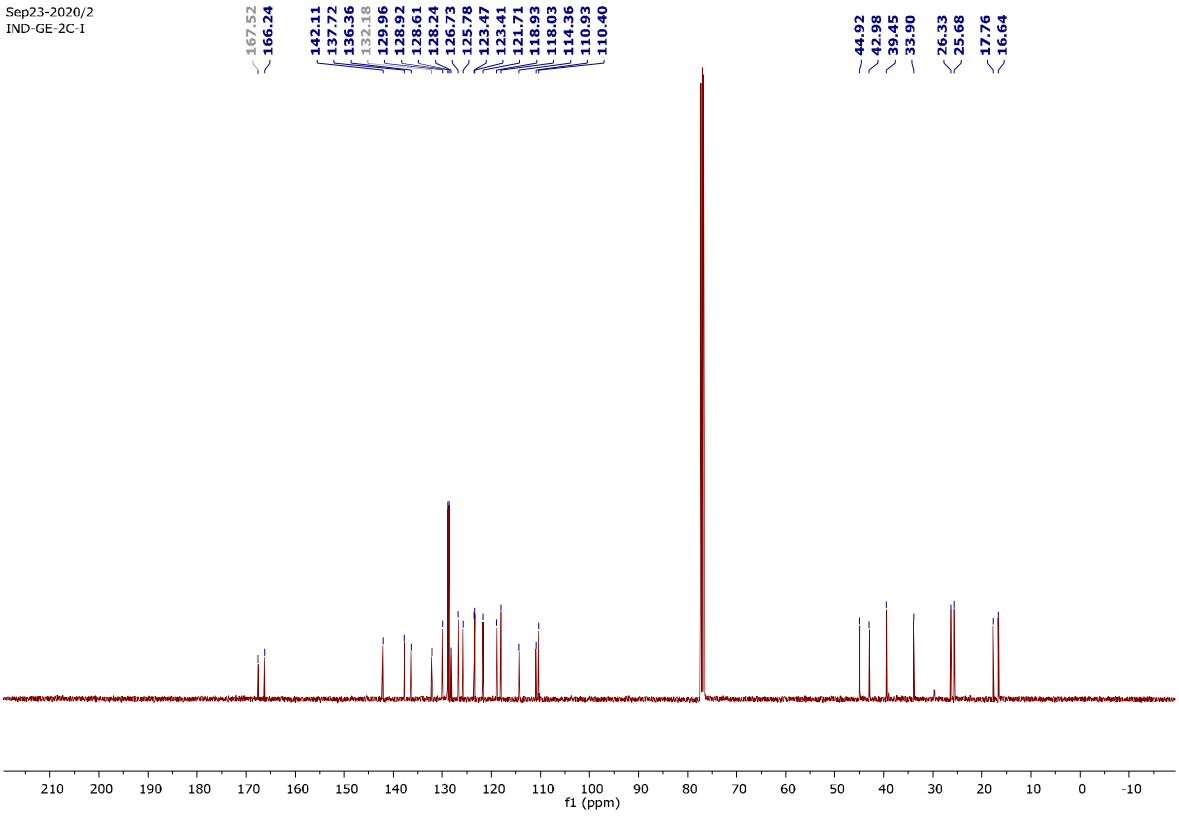
Analogue 7r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