CHAPTER 6

Concluding remarks and future scopes
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**Concluding remarks:**

1. Convenient synthetic methodologies for the synthesis of structurally important pyrimidine scaffolds viz. pyrido[2,3-\textit{d}]pyrimidine, pyrrolo[2,3-\textit{d}]pyrimidine and pyrido[2,3-\textit{d}:6,5-\textit{d}]dipyrimidine-2,4,6,8-tetraone have been developed.

2. KI-VO(acac)$_2$-H$_2$O$_2$-AcOH has been established as an efficient iodinating agent for regioselective iodination of pyrimidinediones at C-5 positon.

3. Some of the synthesized compounds have been found to possess modest antibacterial activity. Antibacterial activity can be increased by functional modification e.g. -NO$_2$ to -NH$_2$.

**Future scopes:**

1. Detailed mechanistic studies can be carried out to establish mechanisms.

2. Computational studies can be carried out to explain the experimental findings.

3. Synthesized compounds can be screened for other possible biological activity.
List of publications


10. Ionic liquid catalyzed, microwave assisted synthesis of Pyrido[2,3-d:6,5-d]dipyrimidine-2,4,6,8-tetraones: **Saikia L.** & Thakur, A. J. (under communication).
Book chapter published:

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Educational Profile:

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Accolades:

2. Qualified CSIR-UGC NET for Lectureship in December, 2010.
3. Qualified GATE in 2006 (GATE-06).

Research Experience:

1. Worked as a JRF in a CSIR sponsored project entitled ‘Radical cyclisation methodology in the synthesis of pyrimidine derivatives’ for two years and as a SRF in the same for one year in the Department of Chemical Sciences, Tezpur University, Assam.
2. Seven years research experience as Ph. D. student in the Department of Chemical Sciences, Tezpur University under the supervision of Dr. A. J. Thakur, Associate Professor, Department of Chemical Sciences, Tezpur University, Assam.

**Teaching Experience:**

1. I have been associated with the Department of Chemistry, Rajiv Gandhi University, Rono Hills, Doimukh as Assistant Professor since 19th August, 2011.

**Papers Published:**


7. Sodium triacetoxyborohydride: *Saikia, L.* *Synlett.* 2010, 11, 1729-1730.

**Book chapter published:**


**Participation in Workshop / Seminar:**

1. Participated in ‘SERC Summer School in Modelling and Informatics in Drug Design’ organized by National Institute of Pharmaceutical Education and Research, Punjab.
2. Participated in ‘14th National Workshop on Catalysis’ held at Tezpur University, Assam.
3. Participated in ‘Frontier Lecture Series’ organized by Tezpur University, Assam.
4. Participated and presented a poster in 13th CRSI National Symposium in Chemistry held at National Institute of Science Education and Research (NISER) and KIIT University, Bhubaneswar.

**Declaration:**

I, Lakhinath Saikia hereby declare that all the information furnished here are true & correct to the best of my knowledge and belief and the event of information being found false or incorrect, I am agree to accept any action against me.

Lakhinath Saikia
01-08-2015