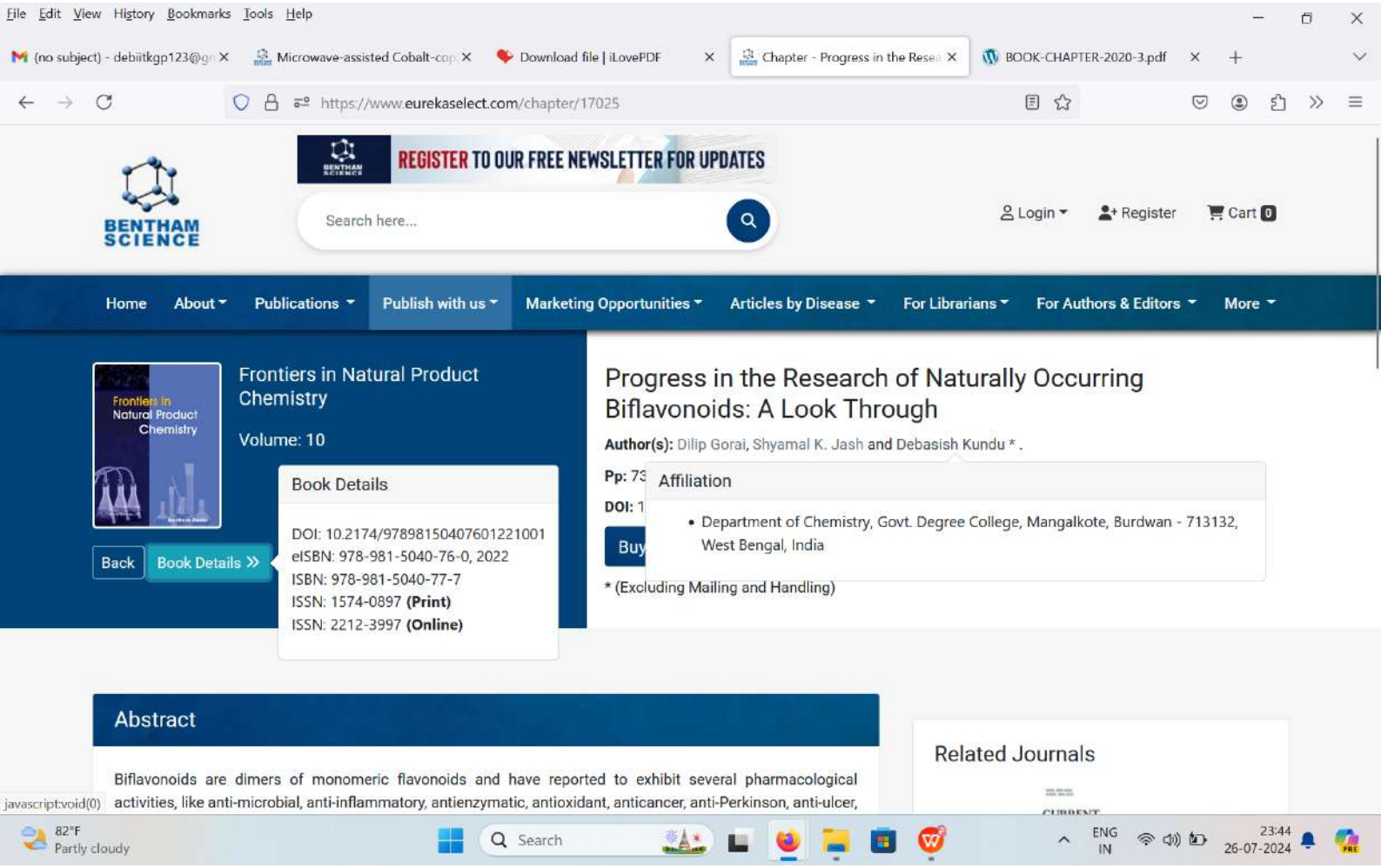
Frontiers in Natural Product Chemistry

Editor:
Atta-ur-Rahman, *FRS*

Bentham Books

Dr. Pradipta Kumar Basu
OFFICER IN CHARGE, W.B.E.S.
Government General Degree College, Mangalkote
Dt. Purba Bardhaman, West Bengal- 713132



Frontiers in Natural Product Chemistry

(Volume 10)

Edited by

Atta-ur-Rahman, *FRS*
Honorary Life Fellow
Kings College
University of Cambridge
Cambridge
UK

Frontiers in Natural Product Chemistry

Volume # 10

Editor: Prof. Atta-ur-Rahman, *FRS*

ISSN (Online): 2212-3997

ISSN (Print): 1574-0897

ISBN (Online): 978-981-5040-76-0

ISBN (Print): 978-981-5040-77-7

ISBN (Paperback): 978-981-5040-78-4

Dr. Pradipta Kumar Basu
OFFICER IN CHARGE, W.B.E.S.
Government General Degree College, Mangalkote
Dt. Purba Bardhaman, West Bengal- 713132

need for a court order if at any point you breach any terms of this License Agreement. In no event will any delay or failure by Bentham Science Publishers in enforcing your compliance with this License Agreement constitute a waiver of any of its rights.

3. You acknowledge that you have read this License Agreement, and agree to be bound by its terms and conditions. To the extent that any other terms and conditions presented on any website of Bentham Science Publishers conflict with, or are inconsistent with, the terms and conditions set out in this License Agreement, you acknowledge that the terms and conditions set out in this License Agreement shall prevail.

Bentham Science Publishers Pte. Ltd.
80 Robinson Road #02-00
Singapore 068898
Singapore
Email: subscriptions@benthamscience.net

BENTHAM SCIENCE

Dr. Pradipta Kumar Basu
OFFICER IN CHARGE, W.B.E.S.
Government General Degree College, Mangalkote
Dt. Purba Bardhaman, West Bengal- 713132

Government General Degree College Mangalkote

CONTENTS

CHAPTER 3

Progress in the Research of Naturally Occurring Biflavonoids: A Look Through

Dilip Gorai[1], Shyamal K. Jash[2] and **Debasish Kundu[3,*]**

[1] *Department of Chemistry, Bolpur College, Bolpur, Birbhum - 731204, West Bengal, India*

[2] *Department of Chemistry, Krishna Chandra College, Hetampur, Birbhum - 731124, West Bengal, India*

[3] *Department of Chemistry, Govt. Degree College, Mangalkote, Burdwan - 713132, West Bengal, India*

Abstract: Biflavonoids are dimers of monomeric flavonoids and have reported to exhibit several pharmacological activities, like anti-microbial, anti-inflammatory, anti-enzymatic, antioxidant, anticancer, anti-Perkinson, anti-ulcer, anti-hypertensive, anti-diabetic, anti-depressant and anti-protozoan. Extensive research work on this important segment of natural compounds is in progress. In this chapter, we report the progress of research on natural biflavonoids from the period of 2005 to early 2020; it includes enlisting newly isolated bioflavonoids from plant sources, biological activities exhibited by the known as well as new compounds and synthetic strategies developed for synthesizing such compounds. In this time period, a total of 247 biflavonoids have been reported either in terms of their first-time appearance or evaluation of their biological activities or both. Out of the reported 247 biflavonoids, 176 have been reported as new compounds from natural plant sources. They have been reported to exhibit a wide range of biological and pharmacological properties, including anti-microbial and antiviral, cytotoxic and anti-cancer, anti-diabetic, anti-anoxic, antioxidant, NO-inhibitory activity, anti-enzymatic, anti-HIV, anti thrombin, anti-allergic, cytoprotective, neuroprotective and anti-inflammatory, which have been discussed in a comprehensive manner. Different synthetic strategies that have been reported for the synthesis of structurally different biflavonoids are also included. This chapter cites 177 references.

Keywords: Anti-cancer, Anti-diabetic, Anti-enzymatic, Anti-microbial, Antioxidant, Antiviral, Biflavonoids, Biological activities, Cytotoxic, Natural distribution, Nomenclature, Occurrence, Structural aspects, Synthesis.

[*] **Corresponding author Debasish Kundu:** Department of Chemistry, Govt. Degree College, Mangalkote, Burdwan - 713132, West Bengal, India; E-mail:chem.debasishkundu@mangalkotegovtcollege.org