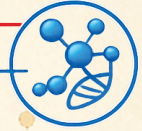


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**Anas Islam, MPharm**

**Badruddeen, PhD**

*Editors*

Author Copy



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## CHAPTER 4

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# Navigating Diabetes Complications and Comorbidities

MOHSIN VAHID KHAN,<sup>1\*</sup> MOHAMMAD RUMMAN,<sup>1</sup> GULAM RABBANI,<sup>2</sup> MOHD KAMIL HUSSAIN,<sup>3</sup> and NAFEES AHMAD<sup>4</sup>

<sup>1</sup>*Department of Biosciences, Integral University, Lucknow, Uttar Pradesh, India*

<sup>2</sup>*School of Chemical Engineering, Yeungnam University, Gyeongsan, Gyeongbuk, Republic of Korea*

<sup>3</sup>*Department of Chemistry, Government Raza Postgraduate College, Rampur, Uttar Pradesh, India*

<sup>4</sup>*Department of Chemistry, Integral University, Lucknow, Uttar Pradesh, India*

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\*Corresponding author

### ABSTRACT

Diabetes mellitus (DM) is a chronic illness common worldwide. The World Health Organization (WHO) reports about 422 million people living with diabetes globally, causing around 1.5 million deaths annually. Lifestyle and environmental changes contribute to a steady increase in diabetes prevalence. DM can result from either inability to produce insulin (type 1 DM) or responding normally to insulin (type 2 DM), leading to sustained hyperglycemia. Hyperglycemia affects multiple organs including kidneys, heart, liver, eyes, and nervous system. One mechanism underlying secondary complications of hyperglycemia is enhanced lipid-peroxidation and increased production of reactive