



## Microbiome: that Changed the Central Dogma

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DNA to RNA and RNA to protein (i.e. transcription and translation) is popularly known as The Central Dogma of Biology. Deviating from the central dogma the microbiome is considered an alternative pathway that affects our phenotype [1]. Recently it is understood that several popular drugs influence at the microbiome level of the human gut and benefits us. For example, we can say that metformin the most popular antidiabetic drug is proved to increase the butyrate-producing taxa of the gut microbiome. When butyrate producing taxa is increased in the gut, butyrate is produced more. It comes in the systemic circulation and improves the glycemic control [2]. This is also true with other antidiabetic drugs [3]. Gut microbiome modification is postulated to play an important role in obesity as well [4].

There is a considerable current interest in understanding the role of the human gut microbiome in the causation of hypertension. Crosstalk of the pathogenetic mechanisms of hypertension and gut microbiome is a reality, and there is an immense possibility that our gut microbiome is essential for regulation of our vascular health [5,6] But the role of antihypertensive drugs on gut microbiome is not studied as on date.

We feel that diuretics, a popular class of antihypertensive drug can work by modification of the gut microbiome. The sulphonamide diuretics can have antibiotic properties analogous to the sulphonamide antibiotics. This has the potential to influence our gut microbiome. There is evidence that in hypertension diuretics have clinical trial proved beneficial effects. Unusually low dose diuretics have proven benefit over other class of antihypertensive drugs. This added benefit of diuretics appears to be irrespective of salt resistance status of the patient [7]. However, the mechanism of such benefit is incompletely understood. Can it be due to the effect of the diuretics on gut microbiome? We feel that time is ripe to explore in this direction.

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