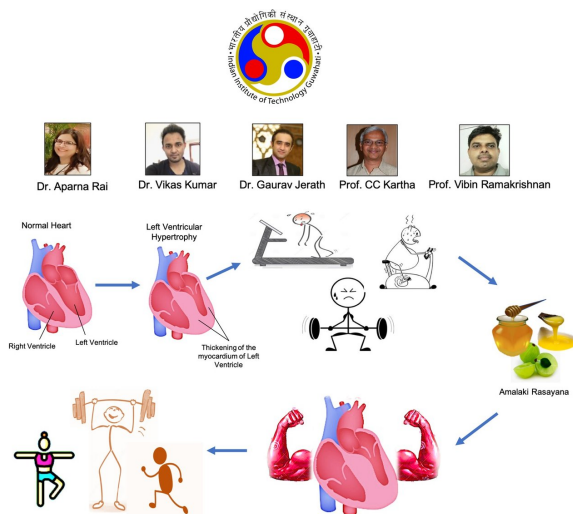


## IIT-G develops modern technique to explore actions of Ayurvedic rejuvenating medicine

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Prof Vibin Ramakrishnan, Professor, Department of Biosciences and Bioengineering, IIT Guwahati (IIT-G) and Prof CC Kartha of Academy of Cardiovascular Sciences (<http://cardiovascularsciences.org/>) have used modern drug development methods to analyse the mode of action of an Ayurvedic rejuvenating medicine - Amalaki Rasayana.

In their study, the results of which have been recently published in Nature partnership journal Systems Biology and Applications, they have shown how Amalaki Rasayana reduces high blood pressure-induced structural and functional changes in the heart.

Prof Ramakrishnan and Prof Kartha had earlier found that long term oral intake of Amalaki Rasayana reduces the thickening of heart muscle and improves heart function. The present study that used the emerging scientific approaches of Network Pharmacology and Chemoinformatics shows how the formulation is likely to work in the human body.

“The hallmark of Ayurvedic system is the long-standing unverified claim that it is a holistic approach; it treats the body as a whole. Our analysis using the tools and techniques of modern medicine suggests that this is, indeed, true”, says Prof Ramakrishnan.

The scientists employed in-vivo studies in small animals, gene-expression and proteomics analysis, informatics tools and the techniques of Systems medicine, all of which are used in the development of allopathic drugs. They also examined the possible synergy among the actions of different components of the Rasayana using the Network Pharmacology approach.

“This interdisciplinary approach provides opportunities for systematic investigations for unravelling the mechanism of action of multicomponent Ayurvedic medicines from the perspective of a network of normal functional pathways as well as pathways

that are altered in chronic diseases”, says Prof Kartha.

The work by Prof Ramakrishnan and Prof Kartha integrates Ayurveda with the principles and practices of modern medicine to contemporise the former’s ‘holistic approach’ with the latter’s ‘magic bullet’ style.