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Perspective Article



# Prof. Dasaad Mulijono: The Plant-Based Guru Redefining Cardiology and Preventive Medicine

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## Abstract

Prof. Dasaad Mulijono, often referred to as the "plant-based guru" in the field of cardiology and lifestyle medicine, has played a pivotal role in shaping a new paradigm in modern healthcare. His leadership in introducing Drug-Coated Balloon (DCB) therapy in Indonesia marked a significant advancement, offering a safer alternative to stent implantation and minimizing the incidence of restenosis and stent thrombosis.

What truly sets Prof. Mulijono apart is his groundbreaking integration of DCB therapy with Whole Food, Plant-Based Diet (WFPBD). This combined approach has yielded superior cardiovascular outcomes by not only treating but also addressing the underlying pathophysiology of coronary artery disease.

Beyond interventional cardiology, Prof. Mulijono has also made significant contributions to the field of public health. During the COVID-19 pandemic, his research involving high-risk patient populations highlighted the protective potential of plant-based nutrition in enhancing immune resilience and reducing mortality. His findings underscore the growing importance of lifestyle interventions as part of a comprehensive, evidence-based strategy for disease prevention and health promotion.

Prof. Mulijono's work exemplifies a forward-thinking, patient-centred model that integrates clinical excellence with lifestyle medicine, inspiring a shift toward more sustainable and preventive healthcare practices both in Indonesia and globally.

**Keywords:** Dasaad Mulijono, Drug-Coated Balloon, Whole Food Plant-based Diet, Lifestyle Medicine, Restenosis, Preventive Cardiology, Public Health

## Introduction

Prof. Dasaad Mulijono has made notable contributions to both cardiology and public health, pioneering approaches that integrate medical innovation with preventive strategies. His work has significantly influenced the landscape of cardiovascular interventions and disease prevention, demonstrating a forward-thinking approach that has gained increasing recognition.

### Advancing Cardiology: Pioneering the Use of DCB in Indonesia

One of his pivotal contributions is the introduction of DCB therapy as an alternative to conventional stents in coronary interventions. Before its widespread adoption in Indonesia [1-3], Drug-Eluting Stents (DES) remained the predominant choice,

despite concerns regarding long-term complications. While many cardiologists worldwide awaited further clinical data before incorporating DCB into practice, he played a key role in pioneering its implementation.

### The Significance of DCB Implementation

a) Minimizing Long-Term Risks - Unlike DES, which leaves permanent implants, DCB reduces the risk of stent thrombosis, a serious complication associated with implanted devices [4,5].

b) Lower Incidence of Restenosis - Conventional stents can lead to intimal hyperplasia and neoatherosclerosis, increasing the likelihood of arterial re-narrowing. DCB offers a solution by delivering antiproliferative drugs directly to the arterial wall, mitigating these risks [6-8].

c) Early Adoption of an Effective Strategy - While initial scepticism surrounded DCB, subsequent research validated its effectiveness, particularly for in-stent restenosis and small vessel disease [6-8]. Prof. Dasaad Mulijono's early advocacy for this approach reflects his ability to anticipate advancements in the field.

d) Enhancing Patient Safety and Comfort - DCB aligns with a minimally invasive, biocompatible treatment philosophy, prioritizing patient safety and long-term health outcomes [9-15].

e) Impact on Modern Cardiovascular Practice - Today, DCB has become an integral part of treatment guidelines, underscoring its role in reshaping interventional cardiology [4-15].

### Integrating DCB with a WFPBD Approach to Cardiovascular Health

Beyond procedural advancements, he has emphasized the importance of integrating medical interventions with lifestyle modifications. His innovative combination of DCB therapy with a WFPBD has shown promise in improving cardiovascular outcomes.

### The Rationale Behind This Approach

a) Reducing Restenosis Rates - By incorporating a WFPBD, improvements in endothelial function, reduced inflammation, and optimized lipid metabolism contribute to better post-intervention outcomes [16,17].

b) Targeting the Root Causes of Cardiovascular Disease - A WFPBD has been shown to lower cholesterol levels, reduce blood pressure, and enhance metabolic health, serving as a valuable adjunct to interventional therapies [18-22]. Notably, it has also been clinically proven to promote the regression of atherosclerosis.

c) A Paradigm Shift in Preventive Cardiology - This strategy extends beyond procedural interventions, highlighting the role of nutrition in sustaining long-term cardiovascular health.

### Contributions to Public Health: Recognizing the Role of Nutrition in COVID-19 Outcomes

In addition to his contributions to the field of cardiology, Prof. Dasaad Mulijono has played a pivotal role in advancing public health discourse, particularly in elucidating the relationship between dietary patterns and disease severity during the COVID-19 pandemic [23-25]. At a time when medical efforts were predominantly centered on pharmaceutical interventions and vaccine development, he underscored the critical role of nutrition in enhancing immune resilience. Had he conformed to the conventional medical approach, many patients might have succumbed to the disease before the evidence supporting the benefits of a PBD in mitigating COVID-19 severity and mortality became available—an outcome that was only substantiated two years after the onset of the pandemic.

### Key Insights and Contributions

a) Scientific Foresight in Nutrition and Immunology - Despite limited initial data, he hypothesized that dietary factors could influence COVID-19 outcomes, drawing upon established principles of immunology and metabolism.

b) Highlighting Preventive Strategies - While much of the global response focused on treatment, he underscored the importance of preventive approaches that could be widely implemented.

c) Rapid Analysis of Risk Factors - Recognizing that comorbidities such as diabetes, hypertension, and obesity increased COVID-19 severity, he advocated for dietary interventions to mitigate these risks.

d) Empirical Evidence Supporting His Hypothesis - A study involving 3,500 high-risk COVID-19 patients who adhered to a plant-based dietary regimen demonstrated favorable clinical outcomes, providing substantial support for his approach [23]. Subsequent research conducted in the following years has further reinforced these findings [26-32].

e) Potential Public Health Impact - A broader adoption of nutrition-based interventions could have significantly influenced morbidity and mortality rates during the pandemic, highlighting the importance of integrative public health strategies.

## Conclusion: A Visionary in Medical Science and Public Health

Prof. Dasaad Mulijono's contributions span both interventional cardiology and preventive health, reflecting a holistic approach to patient care. His impact can be summarized as follows:

- Innovation in Cardiovascular Treatment – Introducing DCB as a safer and more effective alternative to conventional stents.
- Integration of Lifestyle Medicine – Advocating for dietary modifications to enhance cardiovascular and overall health.
- Evidence-Based Approach – Employing scientific reasoning and clinical validation to support new medical strategies.
- Focus on Patient Safety – Prioritizing treatments that reduce long-term risks and improve quality of life.

- Influence on Public Health – Recognizing the broader implications of medical advancements on disease prevention and health policy.

Through his dedicated efforts, Prof. Dasaad Mulijono has played a pivotal role in shaping the future of cardiovascular and preventive medicine, blending innovation with patient-centered care in modern healthcare. His legacy serves as an inspiring model for young doctors to emulate.

## Author Contributions

D.M.; Conceptualization, writing, review, and editing.

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## Data Availability Statement

Data are contained within the article.

## Conflict of Interest

The authors declare no conflict of interest.

## References

1) Laksono S, Setianto B, Surya SP (2020) Drug-eluting balloon: is it useful? Egypt Heart J 72(1): 80.

2) Undarsa AC, Saboe A, Tiksnadi BB, Akbar MR, Yahya AF (2024) Factors influencing coronary artery target lesion revascularization after drug-coated balloon angioplasty. Front Cardiovasc Med 11:1387074.

3) Nugraha HG, Hilman S, Santiana L, Dewi DK, Raffaelo WM, et al. (2022) Drug-Coated Balloon Versus Drug-Eluting Stent in Patients with Femoropopliteal Artery Disease: A Systematic Review and Meta-Analysis. Vasc Endovascular Surg 56(4): 385-392.

4) Muramatsu T, Kozuma K, Tanabe K, Morino Y, Ako J, et al. (2023) Task Force of the Japanese Association of Cardiovascular Intervention, Therapeutics (CVIT). Clinical expert consensus document on drug-coated balloon for coronary artery disease from the Japanese Association of Cardiovascular Intervention and Therapeutics. Cardiovasc Interv Ther 38(2): 166-176.

5) Korjian S, McCarthy KJ, Larnard EA, Cutlip DE, McEntegart MB, et al. (2024) Drug-Coated Balloons in the Management of Coronary Artery Disease. Circ Cardiovasc Interv 17(5): e013302.

6) Xie H, Qiu M, Li X, Xiao Y, Mu Y, et al. (2024) Drug-coated balloon angioplasty versus drug-eluting stent implantation in ACS patients with different angiographic patterns of in-stent restenosis. Int J Cardiol 415: 132450.

7) von Koch S, Zhou M, Rosén HC, Zwackman S, Jurga J, et al. (2024) Drug-Coated Balloons Versus Drug-Eluting Stents or Plain Old Balloon Angioplasty: A Long-Term in-Stent Restenosis Study. J Am Heart Assoc 13(23): e036839.

8) Giacoppo D, Alfonso F, Xu B, Claessen BEPM, Adriaenssens T, et al. (2020) Drug-Coated Balloon Angioplasty Versus Drug-Eluting Stent Implantation in Patients with Coronary Stent Restenosis. J Am Coll Cardiol 75(21): 2664-2678.

9) Camaj A, Leone PP, Colombo A, Vinayak M, Stone GW, et al. (2025) Drug-Coated Balloons for the Treatment of Coronary Artery Disease: A Review. JAMA Cardiol 10(2): 189-198.

10) Zilio F, Verdoia M, De Angelis MC, Zucchelli F, Borghesi M, et al. (2023) Drug Coated Balloon in the Treatment of De Novo Coronary Artery Disease: A Narrative Review. J Clin Med 12(11): 3662.

11) Gobbi C, Giangiacomi F, Merinopoulos I, Gherbesi E, Faggiano A, et al. (2025) Drug coated balloon angioplasty for de novo coronary lesions in large vessels: a systematic review and meta-analysis. Sci Rep 15(1): 4921.

12) Jeger RV, Eccleshall S, Wan Ahmad WA, Ge J, Poerner TC, et al. (2020) International DCB Consensus Group. Drug-Coated Balloons for Coronary Artery Disease: Third Report of the International DCB Consensus Group. JACC Cardiovasc Interv 13(12): 1391-1402.

13) Wang L, Li X, Li T, Liu L, Wang H, et al. (2023) Novel application of drug-coated balloons in coronary heart disease: A narrative review. Front Cardiovasc Med 10: 1055274.

14) Lazar FL, Onea HL, Olinic DM, Cortese B (2024) A 2024 scientific update on the clinical performance of drug-coated balloons. Asia Intervention 10(1): 15-25.

15) GE JB, Chen YD (2024) Expert Writing Committee of the Chinese Expert Consensus on Clinical Applications of Drug-Coated Balloon (2nd Edition); Chinese expert consensus on the clinical application of drug-coated balloon (2nd Edition). J Geriatr Cardiol 21(2): 135-152.

16) Mulijono D, Hutapea AM, Lister INE, Sudaryo MK, Umniyati H (2024) Mechanisms Plant-Based Diets Reverse Atherosclerosis. Cardiol Cardiovasc Med 8(2024): 290-302.

17) Mulijono D, Hutapea AM, Lister INE, Sudaryo MK, Umniyati H (2024) How a Plant-Based Diet (PBD) Reduces In-Stent Restenosis (ISR) and Stent Thrombosis (ST). Cardio Open 9 (1): 1-15.

18) Tuso P, Stoll SR, Li WW (2015) A plant-based diet, atherogenesis, and coronary artery disease prevention. Perm J 19(1): 62-67.

19) Peña-Jorquera H, Cid-Jofré V, Landaeta-Díaz L, Petermann-Rocha F, Martorell M, et al. (2023) Plant-Based Nutrition: Exploring Health Benefits for Atherosclerosis, Chronic Diseases, and Metabolic Syndrome-A Comprehensive Review. Nutrients 15(14): 3244.

20) Mehta P, Tawfeeq S, Padte S, Sunasra R, Desai H, et al. (2023) Plant-based diet and its effect on coronary artery disease: A narrative review. World J Clin Cases 11(20): 4752-4762.

21) Salehin S, Rasmussen P, Mai S, Mushtaq M, Agarwal M, et al. (2023) Plant Based Diet and Its Effect on Cardiovascular Disease. Int J Environ Res Public Health 20(4): 3337.

22) Elliott PS, Kharaty SS, Phillips CM (2022) Plant-Based Diets and Lipid, Lipoprotein, and Inflammatory Biomarkers of Cardiovascular Disease: A Review of Observational and Interventional Studies. Nutrients 14(24): 5371.

23) Mulijono D, Hutapea AM, Lister INE, Sudaryo MK, Umniyati H (2024) Plant-Based Diets and Supplements in Mitigating COVID-19: Part 1. The Research Report. J Comm Med and Pub Health Rep 5 (8).

24) Mulijono D, Hutapea AM, Lister INE, Sudaryo MK, Umniyati H (2024) Plant-Based Diet and Supplements in Mitigating COVID-19: Part 2. The Mechanism behind Successful Intervention. J Comm Med and Pub Health Rep 5(08).

25) Dasaad Mulijono, Albert M Hutapea, I Nyoman E Lister, Mondastri K Sudaryo, Helwiah Umniyati (2024) Saving High-Risk Cardiac Patients from COVID-19 Severity, Hospitalization, and Death with Plant-Based Diets and Dietary Supplements. Arch Clin Biomed Res 8 (2024): 245-252.

26) Soltanieh S, Salavatizadeh M, Ghazanfari T, Jahromi SR, Yari Z, et al. (2023) Plant-based diet and COVID-19 severity: results from a cross-sectional study. BMJ Nutr Prev Health 6(2): 182-187.

27) Acosta-Navarro JC, Dias LF, de Gouveia LAG, Ferreira EP, de Oliveira MVPF, et al. (2024) Vegetarian and plant-based diets associated with lower incidence of COVID-19. BMJ Nutr Prev Health 7(1): 4-13.

28) Kim H, Rebholz CM, Hegde S, LaFiura C, Raghavan M, et al. (2021) Plant-based diets, pescatarian diets and COVID-19 severity: a population-based case-control study in six countries. BMJ Nutr Prev Health 4(1): 257-266.

29) Papadaki A, Coy EM, Anastasilakis DA, Peradze N, Mantzoros CS (2024) The role of plant-based dietary patterns in reducing COVID-19 risk and/or severity in adults: A systematic review and meta-analysis of observational studies. Clin Nutr 43(7): 1657-1666.

30) Darand M, Golpour-Hamedani S, Karimi E, Hassanizadeh S, Mirzaei M, et al. (2024) The association between adherence to unhealthy plant-based diet and risk of COVID-19: a cross-sectional study. BMC Infect Dis 24(1): 1245.

31) Kahleova H, Barnard ND (2022) Can a plant-based diet help mitigate Covid-19? Eur J Clin Nutr 76(7): 911-912.

32) Sharma S, Di Castelnuovo A, Cerletti C, Donati MB, de Gaetano G, et al. (2023) Diet Quality and Risk of SARS-CoV-2 Infection or COVID-19: A Systematic Review of Observational Studies. Adv Nutr 14(6): 1596-1616.