

IN PURSUIT OF SCIENTIFIC TRUTH:

IDEAS MATTER

A MEMOIR by Academician Tan Sri Emeritus
Professor Datuk Dr Augustine Ong Soon Hock

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N DR. MAHATHIR MOHAMAD

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Professor Datuk Dr Augustine Ong Soon Hock

YAB Tun Dr. Mahathir Mohamad,

*Thank you for your guidance and
inspiration. Your vision for innovation
and establishment of STE infra-structure
are much appreciated*

*Augustine Ong
1 Nov. 2018*



PUSTAKA PERDANA



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DEDICATION

*To the late Rev. Bro. Edmund McCullagh of the De La Salle Mission
for providing me the foundation of my development.*

*To Professor D H Hey FRS and Professor J I G Cadogan FRS of
King's College London for inspiring me to embark on my journey
of scientific discovery.*



In Pursuit of Scientific Truth: Ideas Matter

A Memoir by Academician Tan Sri Emeritus Professor Datuk Dr Augustine Ong Soon Hock

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FOREWORD

We live in a fast-changing world and indeed the momentum of change is accelerating by the day. Yesterday was a dream; tomorrow will be the future; but today is the reality. Unless we act today to create the future, we will continue to live in the past and regress competitively with the rest of the world. Malaysia was competitively ahead of many Asian countries in the past. Korea is a good example of a country economically worse off only some thirty years ago, but it is now acknowledged as commercially, economically, managerially and technologically superior to Malaysia. Even in the sports field our football was rated better when Malaysia beat the Korean side for the 1980 Moscow Olympics, but today Korea qualified for the 2018 FIFA World Cup. We have to accept the fact that the prosperity of a nation and its citizens depends primarily on the ingenuity of its people to invent the future.

Tan Sri Emeritus Professor Datuk Dr Augustine Ong Soon Hock fits with the notion of a citizen in a hurry to create the future for Malaysia. His memoir, *In Pursuit of Scientific Truth: Ideas Matter*, is an autobiography of his life over the last eighty plus years. Grounded in early hardship, schooled in holistic development and mentored by forward looking academics and renowned scientists and notable personalities, Tan Sri Augustine is a thinker with an insatiable enquiring mind focused on creating a better world. Chemistry was his calling, but the same degree of toughness that he brings to his eureka moments in research, such as the discovery of the sn-2 Hypothesis, has also flowed into other fields of human endeavour - creativity, inventions, conferences and the continuing search for truth. He may be publicly recognised as a Professor and a former Director-General of PORIM, but he was the force behind the creation of national institutions, such as MINDS, ITEX, MOSTA, COSTAM, all of which are vividly described in his memoir.

Over half a century of continuous contribution of thought leadership is a remarkable achievement. Tan Sri Augustine's insights and comments are valuable milestones in the history of the development of Malaysia. Most Malaysians will call it a day by age seventy years. But the continuing inquisitiveness drives him to ponder, think and suggest new ways to create the future. Most useful human creations started with the question *why not?* We therefore need more Malaysians to challenge the status quo and discover new opportunities for economic and social progress. Reading Tan Sri Augustine's memoir offers a good insight into the mind of a Malaysian committed to excellence in the search for truth and new opportunities.

The memoir is smooth and easy reading, except for minor more technical sections relating to chemistry equations. It represents a Malaysian tale of the struggle for survival, the drive to excel, the search for truth, the dream for happiness and the desire to contribute to a better world. We do need more such tales so that our young can understand that the path to happiness and prosperity also demands commitment and sacrifice.

As our country seeks to be a fully developed nation, initially by 2020 but now as soon as possible, the vast accumulated expertise of our top thinkers should be harnessed to support this quest. Tan Sri Augustine has documented his thoughts through his memoir. Hopefully, others who also have similar visions can contribute to the task of creating a united, progressive and advanced nation by documenting their thoughts to be shared by all. The best legacy that we can bequeath to the next and future generations is to make a difference in their lives through innovative ideas that can be translated into worthwhile deliverable action.

Dr Tarcisus Chin
Former CEO and Past Chairman
Malaysian Institute of Management

5th September 2018

PREFACE

I have been thinking about writing this memoir for some time now. As a Senior Fellow and founding member of the Academy of Sciences Malaysia, I have been requested to pen my thoughts and life experiences, and my children have encouraged me to do the same.

Amidst my journey through life, there have been many critical moments when I have been faced with decisions about my future. It all seemed nebulous then. Interestingly, some of the decisions turned out well. At eighteen years old, I decided to study science. There were many reasons and thoughts going through my mind at that time. But I felt strongly that I wanted to understand nature and to pursue research.

Beyond the comfort of my laboratory, I eventually ventured into the palm oil industry, only to be called upon to head the Malaysian team in the unexpected anti-palm oil campaign in 1987. Today, in the international arena, my work on free radicals and palm oil research is widely recognised. I have been called the ‘Father of Malaysian Palm Oil’ and have attained a certain level of academic excellence with various awards, including Distinguished Science Alumni of the National University of Singapore, Fellow of the Third World Academy of Sciences (Italy) and Fellow of King’s College (London).

But why write a memoir? The chosen title reflects what I have been doing all my life - my passion for new ideas that no one has proposed and developed, to discover new information about natural phenomena. Unlike art and concepts, scientific discovery involves absolute truths. A new idea in science must be proved, there must be supporting evidence. I find the process exciting. It is like being the first to climb Mount Everest, it is an adventure into the unknown.

For instance, when no one had discovered the shape of a free radical, I designed an experiment to discover what the shape is. My research on free radical cyclisation led to unexpected cyclisation products. There have been many such experiences. Science progresses because its ideas are based on experimentation. I have shown that palm oil behaves like olive oil and stated the explanation behind it. To prove it, a multi-country study had been initiated. I have had work registered in science journals that are housed in the libraries of the world. Of course, I do not know whether it is egoism or not, but I would like to be remembered as the first to suggest certain things. It is my legacy to Malaysia and to the world.

This memoir serves several purposes. I want to record my transition from the purely academic research of free radicals to applied research in the chemistry and technology of palm oil. Secondly, these are my personal observations on the growth of Malaysia through the periods of British colonialism, the Japanese Occupation, our eventual independence and Malaysia today.

In a publication celebrating its 50th anniversary, University of Malaya mentioned my name as one of fifty alumni members who contributed to the growth of Malaysia. This connects to my third reason for this memoir - my belief in Malaysia, in the potential of her people. I want to encourage Malaysians to pursue a culture of innovation, one of research and development - to build this country to a level of excellence that I know her people are capable of.

In this memoir, I have included my philosophy of living. A long time ago, I realised that neither politics nor the military suited me. Certainly, the influence of the La Salle Brothers, my early teachers, had an impact on me. The Brothers taught me to understand the nature of sacrifice, that there is more to life than monetary gain. I feel it is important to give back to society. I would also like to recognise my fellow contemporaries, scholars from academia as well as thought leaders whom I have met along the way and who have shared their ideas with me.

My life has been in the pursuit of scientific truth. It has always been more in harmony with the academic line and helping others live better lives. I like to play with ideas and in this memoir, I share some of my current ideas working as part of the civil society.

Because ideas matter.

ACKNOWLEDGEMENTS

I have decided to focus on my journey of discovering scientific truths in this memoir. For this adventure, I have to thank my teachers, friends, leading academics as well as my co-workers and post-graduate students. The last but not least, my wife Lily Leong Lai Han who managed all family matters, thus giving me much space for academic activities.

To realise the publication of this memoir amidst my other responsibilities, Kathleen Sammy has been engaged to translate my thoughts and reminiscences via dictation. I must acknowledge her skills and additional information to make the text easy reading.

I was fortunate to obtain the assistance of Dr Tarcisus Chin, Christine Ong and Dr Cheng Sit Foon to read the draft and improve the text. Thanks to Hiroko Ong and Caitlin Chee, we have some memorable pictures to enliven the text. I would like to record my appreciation to Mary Low for her invaluable assistance in co-ordinating this project.

I am grateful to Dr Tarcisus Chin for his guidance, advice and the foreword to the memoir. Finally, my deepest appreciation to Malaysian Invention and Design Society (MINDS) for sponsoring the publication of this memoir.

AUTHOR

Academician Tan Sri Emeritus Professor Datuk Dr Augustine S. H. Ong is a graduate of University of Malaya (B.Sc. Hons First Class, M.Sc) and University of London King's College (Ph.D in Organic Chemistry) as well as Fulbright-Hays Fellow at the Massachusetts Institute of Technology (MIT). Tan Sri Ong is the former Director-General of the Palm Oil Research Institute of Malaysia (PORIM) now known as Malaysian Palm Oil Board (MPOB).

He is the founder and President of the Malaysian Invention and Design Society (MINDS), a post that he has held since 1987. He is recognised both nationally and internationally in the field of lipid chemistry being elected as the Chairman, International Society for Fat Research (ISF) in 1997. He is the founder President and current President of the Malaysian Oil Scientists' and Technologists' Association (MOSTA).

Tan Sri Ong has been conferred: the Senior Fellow of the Academy of Sciences Malaysia, Fellow of the Royal Society of Chemistry (London), Fellow of King's College London, Fellow of the Third World Academy of Sciences, Tokoh Inovasi Universiti Teknologi Malaysia (UTM); Emeritus Professor, University Science Malaysia (USM); Hon. Doctor of Science, Universiti Malaysia Perlis (UniMAP); Hon. Doctor of Science, the University of Nottingham; Merdeka Award for Health, Science & Technology; Palm Oil Industry Leadership Award (PILA); Pioneer in Tocotrienol Research from The Oxygen Club of California; Anugerah Tokoh Akademik Negara; Distinguished Science Alumni Award from the National University of Singapore; and the IFIA Grand Gold Medal & Certificate for Altruistic Promotion of Inventors from the International Federation of Inventors' Associations.

In 2012, he received the Merdeka Award for his outstanding contribution to the research and development of the chemistry and technology of palm oil, and for his significant role in advocating and promoting the Malaysian palm oil industry to the world.

He is cited Scientist, Malaysia in 'Southeast Asian Personalities of Chinese Descent: A Biographical Dictionary'.

CHAPTER ONE

The Early Years: Decisions and Challenges

It was part of the family tradition that my mother, Mdm Leong Yoke Fong, who lived in Kuala Lumpur, would return to our ancestral home in Alor Gajah when it was time for childbirth. My eldest brother was born there and our mother took him home. As expected, when my turn arrived, my mother went to Alor Gajah. I was born on Tuesday, 18 September 1934. However, my mother returned to Kuala Lumpur without me. She left me behind to be raised by my grandmother.

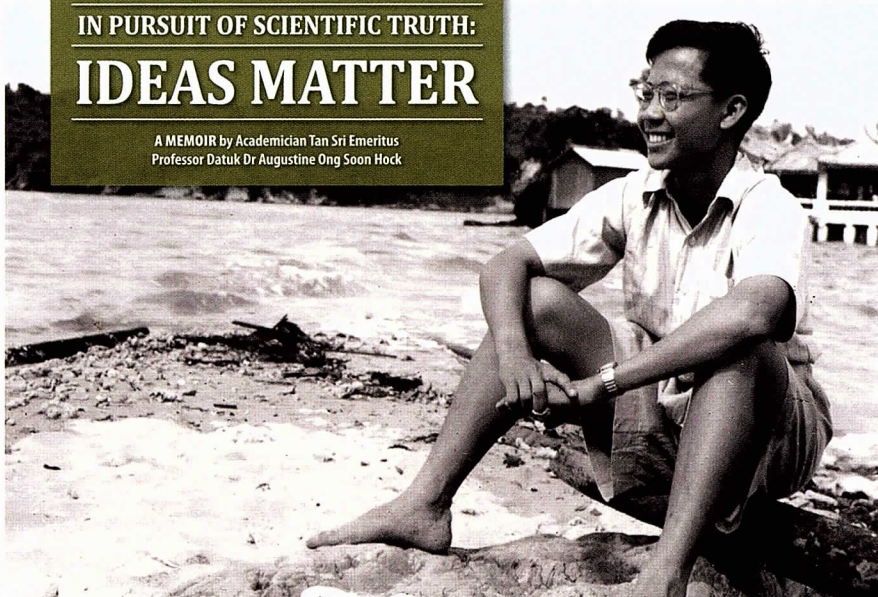
Now, I do not know why she did that. I never asked her. Perhaps, at that point in time, it was difficult for her to bring up two boys. Anyway, when my other siblings were born, they were taken back to Kuala Lumpur. I continued staying in Alor Gajah. I suppose it seems rather sad but it is part of who I am today. More importantly, I have enjoyed my life - the ideas and discoveries I have made and the people I have met along the way.

So I grew up on a rubber estate with my grandmother, and a sort of adopted granduncle and his wife who also looked after me in Alor Gajah, a town located 25 km from Malacca City in Malaysia. My maternal grandparents were from China. My paternal grandfather, Ong Kok Seng was from China and his wife, my grandmother, Ong Kim Neo, was Hakka (Nyonya). The Baba-Nyonya are the Peranakan Chinese or Straits-born Chinese, descendants of Chinese immigrants who came to the Malay archipelago including British Malaya. There is a portrait of my paternal grandfather that hangs in the ancestral home. Dressed in formal robes,



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Academician Tan Sri Emeritus Professor Datuk Dr Augustine Ong Soon Hock is known to many as the 'Father of Malaysian Palm Oil'. In 2012, he was presented with the Merdeka Award in recognition of his outstanding contribution to the research and development of the chemistry and technology of palm oil and for advocating and promoting Malaysian palm oil industry to the world. Tan Sri Ong began his career as a lecturer with University of Malaya in 1959, and throughout his distinguished academic career has amassed awards and titles from various institutions including Fulbright-Hays Fellow at the Massachusetts Institute of Technology (MIT, USA), Fellow of the Third World Academy of Sciences, Senior Fellow of the Academy of Sciences Malaysia and Fellow of King's College, London. In this memoir, Tan Sri Ong reflects on the choices that led him towards being recognised both nationally and internationally in the field of lipid chemistry. From his early years growing up in Malacca to the integral role that he played in the 'War of Oils', this is a story of a man who believes in the power of ideas and innovation. Tan Sri Ong continues to be actively involved in non-governmental organisations. He is the President of the Malaysian Invention and Design Society (MINDS) and Malaysian Oil Scientists' and Technologists' Association (MOSTA).

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