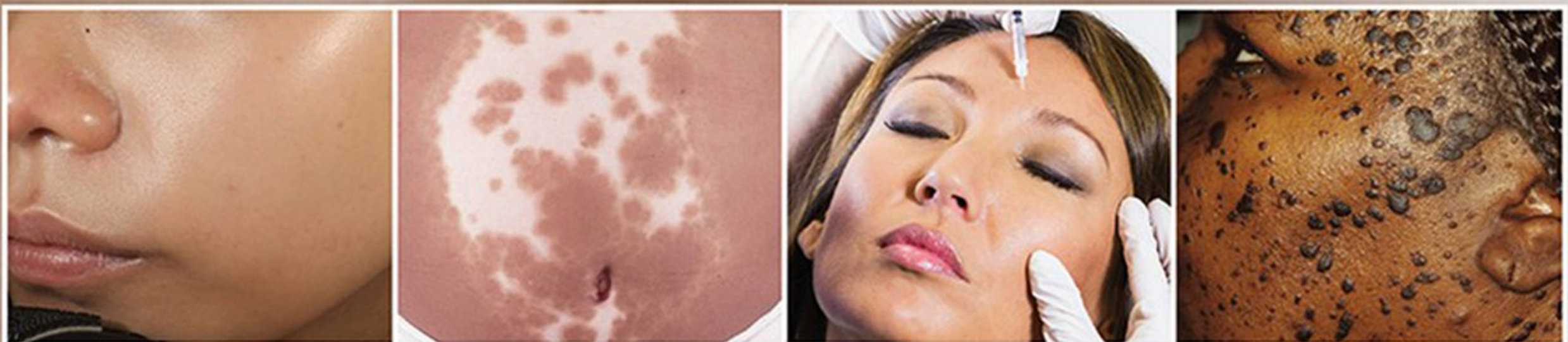


SECOND
EDITION

Susan C. Taylor
A. Paul Kelly
Henry W. Lim
Ana Maria Anido Serrano

TAYLOR AND KELLY'S

FOR
DERMATOLOGY
Skin of Color



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Education

Taylor and Kelly's Dermatology
for Skin of Color

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Taylor and Kelly's Dermatology for Skin of Color

Second Edition

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Dedication



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DEDICATION/IN MEMORIAM FOR DR. A. PAUL KELLY

The second edition of Taylor and Kelly's *Dermatology for Skin of Color* is dedicated to co-editor A. Paul Kelly, who died in May of 2014 in Muscat, the Sultanate of Oman, from complications of Parkinson disease. Dr. Kelly was a pioneer in dermatology, an institution builder, scholar, researcher, educator, lecturer, and author. His lifelong dream of publishing a textbook specifically about skin diseases affecting people of color was realized with the first edition of *Dermatology for Skin of Color*.

Born in 1938, in Asheville, North Carolina, he was the son and grandson of physicians and graduated from Brown University and Howard University's College of Medicine. He was Chief of Dermatology for 35 years at King/Drew Medical Center in Los Angeles, where he developed a world-class residency program that trained more than a hundred dermatology residents and medical students.

Dr. Kelly was editor-in-chief of the *Journal of the National Medical Association* from 1997 to 2004. He was the second African American member of the American Dermatological Association and later its president. He was the first African American president of the Association of Professors of Dermatology, and of the Pacific Dermatologic Association. He was also elected to the Alpha Omega Alpha Honor Medical Society and received the Outstanding Professor Award from the Charles R. Drew University of Medicine and Science's academic senate.

Throughout his career, Dr. Kelly researched skin diseases in people of color, particularly keloidal scarring. After retirement, he became a Fulbright Regional Research Scholar and brought his keloid research project to Sultan Qaboos University in Oman. There he assembled an extraordinary team of dermatologists and geneticists from many countries to carry out an ongoing epidemiologic and genetic study on familial keloids.

Paul is survived by his wife of 48 years, Beverly Baker-Kelly, PhD, EdD, Esq, who was also a Fulbright Scholar in Oman, thus making them the first African American couple in history to both be Fulbright Scholars. They have two daughters, Traci and Kara, two son-in-laws, Brian and Rahsaan, and two granddaughters, Keiley and Hayden Kelly-Thompson.

It was through Dr. Kelly's extraordinary efforts and dedication to excellence that the second edition of *Taylor and Kelly's Dermatology for Skin of Color* was completed while he lived in Muscat, Oman. This is a part of his enduring legacy.

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Henry W. Lim
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Preface

Historically, mainstream dermatologic research, literature, and training had little focus on skin of color. In addition to the paucity of reliable information regarding the pathology, physiology, and reactivity of more darkly hued skin, there were misconceptions based on myth, folklore, and prejudice. Fortunately, by the end of the twentieth century, new interest and attention had turned to the burgeoning field of skin of color. This is most relevant as the demographics of patient populations are changing worldwide. For example, in the United States, it is estimated that black, Hispanic, and Asian Americans will comprise approximately 50% of the population by the year 2050.

Textbooks first by Johnson and then by Halder and Grimes served to create a foundation upon which an understanding of ethnic skin, pigmented skins, and darker skin types has been built. Efforts by the Skin of Color Society, the Dermatology section of the National Medical Association, and the American Academy of Dermatology have also aided in advancing understanding of skin of color.

The first edition of *Dermatology for Skin of Color* was published in 2009. It was a comprehensive textbook and photographic atlas written by dozens of nationally and internationally recognized experts in the field. The two editors involved in the edition, A. Paul Kelly and Susan

C. Taylor, were extremely gratified by the favorable reception of the textbook. With the evolving knowledge of the field, this second edition is intended as both a textbook and as an up-to-date reference for all physicians, especially dermatologists, medical students, dermatology residents, and physician extenders. It contains chapters on structure, function, biology, and the myriad of diseases occurring in patients of color as well as cosmetic issues. In addition, *Dermatology for Skin of Color* provides a rich understanding of the cultural habits, practices, beliefs, and use of alternative medicine by patients of diverse backgrounds. It concludes with a section on comparative dermatology from Africa, Asia, and Latin America and a spectacular atlas of skin of color dermatology.

As our population grows increasingly multiracial, multicultural, and multiethnic, dermatologists will be challenged with the task of recognizing how darker skin differs from lighter skin, what is normal versus pathologic, which treatments have the highest efficacy and lowest morbidity, and how to interact with patients in a culturally competent manner. It is our hope that this book will serve as an invaluable tool to help dermatologists and the larger medical community meet those challenges.

A. Paul Kelly
Susan C. Taylor
Henry W. Lim
Ana A. Serrano

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Acknowledgments

Emotional sustenance became very important to me as I undertook and progressed with my editorial tasks on the second edition of *Dermatology for Skin of Color* while my body was being progressively ravaged by Parkinson disease. My wife of 48 years, Beverly Baker-Kelly, was my indispensable partner throughout each phase of the production of this second edition. She did double duty as a Scholar-in-Residence in business law at the Modern College of Business and Science in Muscat, Oman, all the while acting as my sous chef in editing this book.

Our daughters, Traci and Kara Kelly; their spouses, Brian Crump and Rahsaan Thompson; our granddaughters, Keiley and Hayden Kelly-Thompson, ages 10 and 13, respectively; and my 95-year-old mother-in-law, Connie Baker, all of California, endured our absences from family holidays and special occasions. They understood that my dual missions were to finish this textbook and to make significant headway on my keloid research project while I was residing in Muscat. Keiley, my oldest granddaughter, took the first edition of the textbook to her school to show it around. I was glad to hear from her teachers how proud my granddaughter was about the book and the adventurous lives of her grandparents in the Arabian Gulf.

Collaboration has always been invigorating and intellectually stimulating for me. I count myself lucky to have assembled an expert, supportive, and energetic editorial staff in Muscat and in the United States. I owe a debt of gratitude to my editorial assistants, Natasha Savoy Smith, Rachel Schiera, Charlotte Woon, Ayshe Ismail, and Louise Morgan in Muscat, and to Patricia Elmore, their counterpart in California. Each editorial assistant delivered expertly finished products.

The skills displayed by Nassir Masoud and Nivu Hussain of Muscat and Gabriel Silva and Tijani Mohammed of Oakland, California, to research, format, organize, and creatively position figures in each of our assigned chapters helped to develop the uniqueness of our book.

Words cannot express the depth of my gratitude to Dr. Muneer Al Maskery, Dean Ahmed Al Naamany, and Mr. Saleh Al Kindi of the Modern College of Business and Science in Muscat for providing spacious office accommodations where our editorial team could meet 24/7, if necessary, to swim through the “molasses” of editorial tasks.

Dr. Art Papier, CEO, and Heidi Halton, Image Collection Manager, at Logical Images supplied wonderfully illustrative images to augment my comprehensive collection of slides featuring skin of color disorders.

A big round of applause goes to Sarah M. Granlund, our developmental editor with McGraw-Hill Medical Publishing, who paid expert attention to the gestalt and minutiae of each chapter in order to produce a textbook of the finest quality. Karen Edmonson and Regina Brown are also to be praised for their commitment to having this book published after taking up the cudgels from Anne M. Sydor.

Thanks are in order to many of my dermatology colleagues, particularly Drs. Pearl Grimes, Fred Quarles, and Howard Maibach, for their input. Many members of the Section on Dermatology of the National Medical Association donated photos for both versions of the textbook and shared their therapeutic pearls of wisdom.

My appreciation also goes to my co-editors, Drs. Susan C. Taylor, Henry Lim, and Ana Maria Anido Serrano. I can remember when Anne Sydor, our magnificently supportive McGraw-Hill publisher, floated the idea to us of the possibility of publishing a second edition of this book. Susan, Henry, and Ana all stepped up to the plate and said, “Count me in,” notwithstanding their fixed commitments and academic responsibilities. It is my deepest hope that generations of dermatologists,

medical practitioners, and the general public will benefit from our joint efforts and commitment to excellence.

A. Paul Kelly

It is with great pride and joy that we present the second edition of *Dermatology for Skin of Color*, which is more comprehensive and expansive than the first edition. This occurred through the dedication of two new editors, whom I thank, Drs. Henry Lim and Ana Maria Anido Serrano, who took up the gauntlet and helped produce a text with global reach. I marvel at the singular determination and dedication of my co-editor, Prof. A. Paul Kelly, who completed this edition despite so many challenges. I thank you, Paul, for being an exemplary friend and colleague. This project would not have come to fruition without the vision and support of Anne M. Sydor, our extraordinary McGraw-Hill Editor, as well as our developmental editor, Sarah M. Granlund. Finally, I acknowledge the love and support of my wonderful family: my husband, Kemel Dawkins, and my daughters, Morgan Elizabeth and Madison Lauren, with whom all things are possible.

Susan C. Taylor

It has been a privilege and pleasure for me to join A. Paul Kelly and Susan Taylor—both longstanding colleagues and friends, and Ana Anido Serrano as co-editor of *Dermatology for Skin of Color*. The first edition, with Paul and Susan as co-editor, has become a standard textbook on this subject. This expanded second edition is the result of the excellent contribution of the authors, all recognized experts on the topics. My special recognition goes to Paul who motivated all of us to move forward with the project, and to Beverly Baker-Kelly, who assisted us in completing it. The team from McGraw-Hill, Anne M. Sydor, Sarah M. Granlund, and Kritika Kaushik, has been superb in bringing this book to fruition.

My deep gratitude goes to my wife of 39 years, Mamie Wong Lim, MD, who is a loving wife, mother to our children Christopher and Kevin, and grandmother to Julian, Madelaine, and Dylan. Her patience and support have made this and many other projects possible.

Henry W. Lim

In both the Sultanate of Oman, where I have lived and practiced dermatology for the past 21 years, and Cuba, where I was born and studied medicine, the people are known to cultivate and exhibit intense feelings of loyalty and deference toward those they respect and cherish. In this instance, I am proud to fit this mold. Loyalty and deference perfectly describe my feelings regarding Prof. Kelly, as we called him from the first day he came to our dermatology department in 2009 at the Sultan Qaboos University Hospital in Muscat, Oman, with his epidemiology and genetics keloid research project.

Our professional relationship soon morphed into a fruitful and productive partnership, culminating in my being invited to become a co-editor for this textbook along with my highly esteemed colleagues, Drs. Susan C. Taylor and Henry W. Lim, both internationally recognized giants in the field of dermatology.

Prof. Kelly, our co-editors, and I worked tirelessly to identify eminent dermatologists from all over the world, including the Arabian Peninsula, India, Malaysia, China, Japan, Europe, Canada, Africa, Latin

America, Mexico, and the United States, who could be invited to contribute their expertise to this second edition of our textbook. To these distinguished contributors, I would like to extend my sincere gratitude. Your expertise, commitment, and diligence will have a huge impact on patient care for countless dermatologists and medical practitioners the world over for many years to come.

But I would be remiss if I did not give equal praise to our team here in Muscat, Oman, who joined hands with us and made this book their own. Our expert editorial staff was headed by Natasha Savoy Smith, an extremely skilled editor—secretly called “barracuda” by the rest of us—who was able to make corrections and discern errors that escaped our trained eyes. Likewise, our other equally dedicated and expert editors, Rachel Schiera, Charlotte Woon, Aisha Ismail, and Louise Morgan, are to be commended.

My thanks to our digitally minded computer experts, Nassir Masoud and Nivu Hussain, who literally worked with us night and day, consistently

going the extra mile to help consolidate, arrange, match up and ultimately transform our images and texts into the beautifully expressive finished product you hold in your hands today.

Also, my highly detail-oriented friend and colleague, Dr. Beverly Baker-Kelly, cannot be thanked enough for her unfailing dedication to the organization and execution of this incredible project. She was our ‘go-to person’ on every aspect of the textbook as she diligently planned and ensured that every task was executed to make our book a magnum opus.

Finally, I would like to take this opportunity to express my profound gratitude from the depth of my heart to my beloved parents, Aramis and Xiomara, to my sister, Laura, to Salim, and to Loay, our son, for their love and continuously unwavering spiritual support.

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Foreword

FOREWORD TO TAYLOR AND KELLY'S DERMATOLOGY FOR SKIN OF COLOR, 2ND EDITION

Acclaimed by The Journal of the American Medical Association as the first comprehensive reference on the subject, the first edition of *Dermatology for Skin of Color* won two PROSE Awards from the Association of Academic Publishers for excellence in Clinical Medicine and for excellence in Biology and Life Sciences. The book was recognized not only for the importance of the topic, but for the quality of the text, photographs, organization, and features.

This second edition is significantly expanded, with 21 new chapters written by experts in the field of dermatology, many more clinical pictures, and improved organization. New chapters cover dermatology for geriatric, adolescent, and pregnant patients, as well as topics on depigmenting agents, viral infections, cutaneous manifestations of internal malignancy, neurofibromatosis, tuberous sclerosis, photoaging, photosensitivity, laser treatment for skin tightening, toxins and fillers, cosmetic practices in Mexico, effects of tattooing and piercing, sickle cell disease, drug eruptions, and the biology of oral mucosa.

Most importantly, this edition takes a more global approach, covering not only Africa, Asia, and Latin America, but also Arab countries. New or augmented chapters address common skin diseases prevalent in each. Other chapters address cultural beliefs and traditions that dermatologists should respect.

The concluding history section now includes Asian American, Hispanic, and African American pioneers in dermatology in the United States.

As the opening chapter states, while race is merely a socially constructed concept, there is a need to focus medically on skin of color to understand and treat various cutaneous diseases. DNA analysis looks promising for helping dermatologists unlock the mysteries of skin.

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Taylor and Kelly's Dermatology
for Skin of Color

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Definitions, Epidemiology, and Cultural Considerations

CHAPTER

1

Skin of Color: A Historical Perspective

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KEYPOINTS

- Myth and religion provided the earliest explanations of skin color.
- Most early rational explanations ascribed skin color to climate.
- Nineteenth-century pseudoscientific theories often supported the polygenist school, which stated that there were separate origins of the “races.”
- Pseudoscientific misinformation, based on faulty or undocumented evidence, justified early twentieth-century sociopolitical prejudices.
- The theory of evolution ended the polygenist argument and subsequently led to theories of skin color based on evolution.
- Modern research led to the vitamin D/sunlight theory and an understanding of the evolutionary process behind skin color.
- The Fitzpatrick skin type scheme classifies skin types by the response of the skin to sun exposure. A few dermatologists use this scheme to classify skin types, although sometimes without fully understanding its correlation to sun exposure.
- Understanding of the biology of the melanin pigmentary system is based on research using light and electron microscopy.
- The Human Genome Project, along with advances in DNA and the mapping of the genes, should help dermatologists to further understand skin diseases and their treatment.

Throughout history, the subject of skin of color has been shrouded in mystery, misconception, mystique, and misunderstanding. Since antiquity, people have sought answers to various questions, such as where skin color comes from, the skin color of the first humans, and why humans developed different skin colors [Table 1-1].¹

Naturally, ancient people sought to answer these questions through mythology. One of the earliest explanations for skin color was proposed by the ancient Greeks. According to their mythology, Phaeton, the son of Helios, the sun god, persuaded his father to let him drive the sun chariot for a day. Because of his inexperience and inability to control the fiery steeds, Phaeton drove the chariot too near the earth over certain lands, burning the people black, and too far from the earth over other regions, causing the people to turn pale and cold [Figure 1-1].² The early Greeks probably had brown skin tones that were midway between fairer and darker pigmented skin.

According to an early African myth, early humans quarreled over the first ox slaughtered for food. The color of their descendants thus was determined by the distribution of the meat; those who ate the liver had black children, those who took the lungs and blood had red children, and those who ate the intestines had white children.³

One North American Indian legend claims that both black and white people were created before the “Earth-maker” had mastered his baking technique. In baking the first human, the creator cooked him too long, and he emerged black. The white person was also a culinary failure

because he was not baked long enough and consequently turned out pale-skinned. It was only with the third attempt that the creator was able to produce the properly baked, golden-brown North American Indian.⁴

A different North American Indian legend attributes differences in skin color to the order in which three men went swimming in a body of water. The first man to dive in left the water dirty but came out clean, and from him there descended white people. The second man jumped into the now somewhat muddied water and exited slightly dirtier than the previous man. Indians were said to have descended from this man. The last man came out of the water black and went on to father all black people.⁵

RELIGIOUS EXPLANATIONS FOR SKIN OF COLOR

Every religion seems to have its own doctrine on the origin of skin of color, especially on the source of black versus white skin. In the Abrahamic religions, one of the most widely cited religious explanations is that the biblical Ham and his descendants became black because he was cursed by Noah. In actuality, there is no mention in the chapter of Genesis regarding the descendants of Ham or of his son Canaan being black; this belief seems to originate in the Talmud, Midrash Rabbah, and other rabbinical writings from the second to the fifth centuries ad as different interpretations of the chapter of Genesis (9:20–27).⁶

There are several versions of this story, with the most popular version being that Noah forbade all the people and animals on the ark to have sexual intercourse. His son, Ham, disobeyed this order and was cursed by being turned black, and subsequently became the ancestor of all black people.⁷

Another version is that Ham laughed at his father while Noah was drunk and lying naked on the ground, spilling his semen. Noah’s other sons, walking backward so as not to see their father’s nakedness, covered Noah with a garment. Noah punished Ham by having the curse fall on his son, Canaan. The descendants of Ham, through Canaan, therefore had dark skin as a result of Ham observing his father’s nakedness; they also had “misshapen” lips because Ham spoke to his brothers about Noah’s condition and curly hair because Ham twisted his head around to observe his father’s nakedness [Figure 1-2].⁸

Yet another version of the story asserts that Ham was cursed with black skin because he resented the fact that his father desired a fourth son. To prevent the birth of a rival heir, Ham is said to have castrated his father.⁷

The Genesis Rabbah, Chapter 37, gives yet a different version. It states that in the quarrel between Ham and Noah, Noah said, “You have prevented me from doing something in the dark, ie, sexual intercourse; therefore, your seed will be ugly and dark-skinned,”⁶ thus giving rise to another commonly held rationale behind the origin of black skin.

The “curse of Ham” has been used by some members of Abrahamic religions to justify racism and the historical enslavement of people of African ancestry, who were believed to be descendants of Ham. They were often called Hamites. This racist theory was widely held during the eighteenth to twentieth centuries but has been largely abandoned since the mid-twentieth century by even the most conservative theologians.⁹

In another biblical story, Cain slew his brother Abel because of jealousy over God’s favor. Cain became an outcast, but a protecting mark was placed on him by God in order to shield him from vengeful hands. The brand he bore associated Cain and his kind with evil. Many who wanted to prove that black people were inferior claimed that Cain’s protecting mark was black skin [Figure 1-3].⁹