

HARRISON™

İÇ HASTALIKLARI PRENSİPLERİ

Önceki Baskıda Yer Alan Editörler

T. R. Harrison
Editor-in-Chief, Editions 1, 2, 3, 4, 5

W. R. Resnick
Editor, Editions 1, 2, 3, 4, 5

M. M. Wintrobe
Editor, Editions 1, 2, 3, 4, 5
Editor-in-Chief, Editions 6, 7

G. W. Thorn
Editor, Editions 1, 2, 3, 4, 5, 6, 7
Editor-in-Chief, Edition 8

R. D. Adams
Editor, Editions 2, 3, 4, 5, 6, 7, 8, 9, 10

P. B. Beeson
Editor, Editions 1, 2

I. L. Bennett, Jr.
Editor, Editions 3, 4, 5, 6

E. Braunwald
Editor, Editions 6, 7, 8, 9, 10, 12, 13, 14, 16, 17
Editor-in-Chief, Editions 11, 15

K. J. Isselbacher
Editor, Editions 6, 7, 8, 10, 11, 12, 14
Editor-in-Chief, Editions 9, 13

R. G. Petersdorf
Editor, Editions 6, 7, 8, 9, 11, 12
Editor-in-Chief, Edition 10

J. D. Wilson
Editor, Editions 9, 10, 11, 13, 14
Editor-in-Chief, Edition 12

J. B. Martin
Editor, Editions 10, 11, 12, 13, 14

A. S. Fauci
Editor, Editions 11, 12, 13, 15, 16, 18, 19, 20
Editor-in-Chief, Editions 14, 17

R. Root
Editor, Edition 12

D. L. Kasper
Editor, Editions 13, 14, 15, 17, 18, 20
Editor-in-Chief, Editions 16, 19

S. L. Hauser
Editor, Editions 14, 15, 16, 17, 18, 19, 20

D. L. Longo
Editor, Editions 14, 15, 16, 17, 19, 20
Editor-in-Chief, Edition 18

J. L. Jameson
Editor, Editions 15, 16, 17, 18, 19
Editor-in-Chief, Edition 20

J. Loscalzo
Editor, Editions 17, 18, 19, 20

HARRISON™

İÇ HASTALIKLARI PRENSİPLERİ

CİLT I

Editörler

J. Larry Jameson, MD, PhD
Robert G. Dunlop Professor of Medicine; Dean, Raymond and Ruth Perelman School of Medicine; Executive Vice President, University of Pennsylvania for the Health System, Philadelphia, Pennsylvania

Dennis L. Kasper, MD
William Ellery Channing Professor of Medicine and Professor of Microbiology and Immunobiology, Division of Immunology, Department of Microbiology and Immunobiology, Harvard Medical School, Boston, Massachusetts

Dan L. Longo, MD
Professor of Medicine, Harvard Medical School; Senior Physician, Brigham and Women's Hospital; Deputy Editor, *New England Journal of Medicine,* Boston, Massachusetts

Anthony S. Fauci, MD
Chief, Laboratory of Immunoregulation; Director, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, Maryland

Stephen L. Hauser, MD
Robert A. Fishman Distinguished Professor, Department of Neurology; Director, UCSF Weill Institute for Neurosciences, University of California, San Francisco, San Francisco, California

Joseph Loscalzo, MD, PhD
Hersey Professor of the Theory and Practice of Medicine, Harvard Medical School; Chairman, Department of Medicine; Physician-in-Chief, Brigham and Women's Hospital, Boston, Massachusetts

Kısım Çeviri Editörleri

Prof. Dr. Teoman Akçay
Prof. Dr. Orhan Ayyıldız
Prof. Dr. Ömer Cevit
Prof. Dr. İbrahim Ertuğrul
Prof. Dr. Abdurrahman Işıkdoğan
Prof. Dr. Tanju Kadir
Prof. Dr. Ayşe Belin Özer
Prof. Dr. Zülal Özkurt
Prof. Dr. Cüneyt Tetikkurt
Prof. Dr. Korkut Ulucan
Doç. Dr. Tarık Ocak
Doç. Dr. Mücahit Emet
Doç. Dr. Nevzat Gözel
Doç. Dr. Sinem Özyılmaz
Dr. Öğr. Üyesi Esra Çınar Tanrıverdi
Uzm. Dr. Meryem Benzer
Uzm. Dr. Mustafa Çelik
Uzm. Dr. Aylin Öztürk Yavuz

NOBEL TIP KİTABEVLERİ

© 2022 Nobel Tıp Kitabevleri Tic. Ltd. Şti.

Harrison İç Hastalıkları Prensipleri

Prof. Dr. Teoman Akçay

ISBN: 978-605-335-701-8

Harrison's™
Principles of Internal Medicine
Twentieth Edition
J. Larry Jameson, MD, PhD; Dennis L. Kasper, MD; Dan L. Longo, MD; Anthony S. Fauci, MD;
Stephen L. Hauser, MD; Joseph Loscalzo, MD, PhD
ISBN 978-1-259-64403-0
Copyright © 2018 by McGraw-Hill Education

Bu kitabın Türkçeye çeviri hakkı © 2018 by McGraw-Hill Education tarafından Nobel Tıp Kitabevleri Tic. Ltd. Sti.'ne verilmiştir. 5846 ve 2936 sayılı Fikir ve Sanat Eserleri yasası hükümleri gereğince herhangi bir bölümü, resmi veya yazısı, yazarların ve yayınlayıcısının yazılı izni alınmadan tekrarlanamaz, basılamaz, kopyası çıkarılamaz, fotokopisi alınamaz veya kopya anlamı taşıyabilecek hiçbir işlem yapılamaz.

NOBEL TIP KİTABEVLERİ TİC. LTD. ŞTİ.

www.nobeltip.com

Millet Cad. No: 111 Çapa-İstanbul
Tel : (0212) 632 83 33
E-posta : destek@nobeltip.com

DAĞITIM
Tel : (0212) 771 52 11 - (0212) 771 33 09
E-posta : hasannazli@nobeltip.com

Yayımcı	:	Nobel Tıp Kitabevleri Tic. Ltd. Şti. Millet Cad. No:111 34104 Fatih-İstanbul
Yayımcı Sertifika No	:	50192
Baskı / Cilt	:	Vadi Grafik Tasarım ve Reklamcılık Ltd. Şti. İvedik Org. San. 1420. Cad. No: 58/1 Yenimahalle/Ankara
Matbaa Sertifika No	:	47479
Sayfa Tasarımı - Düzenleme	:	Nobel Tıp Kitabevleri
Kapak Tasarım	:	Hakkı Çakır
Baskı Tarihi	:	Nisan 2022 - İstanbul

UYARI

Tıp sürekli değişen bir bilimdir. Yeni araştırmalar ve klinik deneyimler bilgimizi genişlettikçe, tedavi ve ilaç tedavisinde değişiklikler gerekmektedir. Bu çalışmanın yazarları ve yayıncısı, eksiksiz ve genel olarak yayın sırasında kabul edilen standartlara uygun bilgi sağlama çabalarında güvenilir olduğuna inanılan kaynakları kontrol etmiştir. Bununla birlikte, insan hatası veya tıp bilimlerinde değişiklik olasılığı göz önüne alındığında, ne yazarlar ne yayıncı ne de bu çalışmanın hazırlanmasında veya yayınlanmasında yer alan diğer herhangi bir taraf, burada yer alan bilgilerin her bakımdan doğru veya eksiksizdir ve herhangi bir hata veya eksiklikten veya bu çalışmada yer alan bilgilerin kullanımından elde edilen sonuçlardan sorumlu değildir. Okuyucuların burada yer alan bilgileri diğer kaynaklarla doğrulamaları önerilir. Örneğin ve özellikle, okuyucuların, bu çalışmada yer alan bilgilerin doğru olduğundan ve önerilen dozda veya uygulama için kontrendikasyonlarda değişiklik yapılmadığından emin olmak için uygulamayı planladıkları her ilacın paketinde bulunan ürün bilgi sayfasını kontrol etmeleri önerilir. Bu tavsiye, yeni veya seyrek kullanılan ilaçlarla bağlantılı olarak özellikle önemlidir.

Kapak İllüstrasyonu

Harrison'ın 6. baskısından başlayarak, kapağında parlak bir ışığın bir görüntüsü, yani bir hastanın oftalmoskopla muayene edilme algısı yer aldı. Harrison'ın bu mecazi sembolü, bilgi ışığının doktorları nihayetinde tüm insanlığı etkileyen hastalıkları daha iyi teşhis etme ve tedavi etme konusunda nasıl güçlendirdiğinin bir hatırlatıcısıdır.

Yazar Bilgilendirme Politikası: McGraw-Hill ve Harrison'ın Yayın Kurulu, tüm katkıda bulunanların bir Harrison bölümünün hazırlanmasını bozma olasılığını artıracak olası finansal veya profesyonel çatışmaları Editörlere ve Yayıncıya açıklamasını şart koşar.

İçindekiler vi
Önsöz xlii

KISIM 1 Tıp Mesleği

1 Tıp Uygulaması 1
Editors
Çeviri: Mustafa Çelik

2 Sağlığı Desteklemek 8
Donald M. Lloyd-Jones, Kathleen M. McKibbin
Çeviri: Mustafa Çelik

3 Klinik Tıpta Karar Verme 13
Daniel B. Mark, John B. Wong
Çeviri: Mustafa Çelik

4 Hastalığın Taranması ve Önlenmesi 22
Katrina A. Armstrong, Gary J. Martin
Çeviri: Mustafa Çelik

5 Gelişmiş Ülkelerde Sağlık Hizmeti Sistemleri 27
Richard B. Saltma
Çeviri: Mustafa Çelik

6 Sağlık Hizmetinin Güvenliği ve Kalitesi 33
David W. Bates
Çeviri: Mustafa Çelik

7 Sağlık Hizmetinde Irksal ve Etnik Uyuşmazlıklar 37
Joseph R. Betancourt, Alexander R. Green
Çeviri: Mustafa Çelik

8 Klinik Tıpta Etik Sorunlar 44
Bernard Lo, Christine Grady
Çeviri: Mustafa Çelik

9 Palyatif ve Yaşam Sonu Tedavisi 47
Ezekiel J. Emanuel
Çeviri: Mustafa Çelik

KISIM 2 Hastalıkların Başlıca Belirti ve Bulguları

ÜNİTE 1 Ağrı

10 Ağrı: Patofizyolojisi ve Yönetimi 65
James P. Rathmell, Howard L. Fields
Çeviri: Damlanur Kucur

11 Göğüs Ağrısı 73
David A. Morrow
Çeviri: Ayşe Demiralay Şenyurt

12 Abdominal Ağrı 81
Danny O. Jacobs
Çeviri: Ayşe Karahasanoğlu

13 Baş Ağrısı 85
Peter J. Goadsby
Çeviri: Mücahit Emet

14 Sırt ve Boyun Ağrısı 89
John W. Engstrom
Çeviri: Mücahit Emet

ÜNİTE 2 Vücut Isısındaki Değişmeler

15 Ateş 102
Charles A. Dinarello, Reuven Porat
Çeviri: Ayşe Demiralay Şenyurt

16 Ateş ve Döküntü 105
Elaine T. Kaye, Kenneth M. Kaye
Çeviri: Mücahit Emet, Ruvejda Mustafa

17 Nedeni Bilinmeyen Ateş 114
Chantal P. Bleeker-Rovers, Jos W. M. van der Meer
Çeviri: Tufan Giray

ÜNİTE 3 Sinir Sistemi Disfonksiyonu

18 Senkop 122
Roy Freeman
Çeviri: Mücahit Emet, Tufan Giray

19 Sersemlik ve Baş Dönmesi 129
Mark F. Walker, Robert B. Daroff
Çeviri: Mücahit Emet, Tarık Ocak

20 Halsizlik (Yorgunluk) 132
Jeffrey M. Gelfand, Vanja C. Douglas
Çeviri: Damlanur Kucur

21 Güçsüzlük ve Paralizinin Nörolojik Nedenleri 135
Michael J. Aminoff
Çeviri: Mustafa Akker

22 Uyuşma, Karıncalanma ve Duyu Kaybı 139
Michael J. Aminoff
Çeviri: Ayşe Çetin

23 Yürüme Bozuklukları, Denge Kaybı ve Düşmeler 143
Jessica M. Baker, Lewis R. Sudarsky
Çeviri: Zaur İbrahimov

24 Konfüzyon ve Deliryum 147
S. Andrew Josephson, Bruce L. Miller
Çeviri: Mustafa Akker

25 Demans 152
William W. Seeley, Bruce L. Miller
Çeviri: Şükrü Çiftçi

26 Afazi, Hafıza Kaybı, Vücut Yarısını İhmal, Frontal Sendromlar ve Diğer Serebral Bozukluklar 157
M.-Marsel Mesulam
Çeviri: Damlanur Kucur

27 Uyku Bozuklukları 166
Thomas E. Scammell, Clifford B. Saper, Charles A. Czeisler
Çeviri: Mücahit Emet, Mustafa Akker

ÜNİTE 4 Göz, Kulak, Burun ve Boğaz Hastalıkları

28 Göz Hastalıkları 177
Jonathan C. Horton
Çeviri: Mücahit Emet, Adem Öztekin

29 Koku ve Tat Duyusu Bozuklukları 194
Richard L. Doty, Steven M. Bromley
Çeviri: Ali Sağlık, Umut Karadaş

30 İşitme Bozuklukları 200
Anil K. Lalwani
Çeviri: Ali Sağlık, Umut Karadaş

31 Boğaz Ağrısı, Kulak Ağrısı ve Üst Solunum Yolu Semptomları 208
Michael A. Rubin, Larry C. Ford, Ralph Gonzales
Çeviri: Ümmühan Gökçen

32 Hastalıkların Oral Bulguları 219
Samuel C. Durso
Çeviri: Ali Sağlık

ÜNİTE 5 Dolaşım Ve Solunum Fonksiyonlarındaki Değişiklikler

33 Dispne 226
Rebecca M. Baron
Çeviri: Ümmühan Gökçen

34 Öksürük 230
Christopher H. Fanta
Çeviri: Ümmühan Gökçen

35 Hemoptizi 232
Anna K. Brady, Patricia A. Kritek
Çeviri: Damlanur Kuçur

36 Hipoksi ve Siyanoz 234
Joseph Loscalzo
Çeviri: Gafur Doğdu

37 Ödem 237
Eugene Braunwald, Joseph Loscalzo
Çeviri: Ayşegül Akçebe

38 Kalp Üfürümlü Hastaya Yaklaşım 240
Patrick T. O'Gara, Joseph Loscalzo
Çeviri: Ahmet Acar

39 Çarpıntılar 249
Joseph Loscalzo
Çeviri: Ahmet Acar

ÜNİTE 6 Gastrointestinal Fonksiyondaki Değişiklikler

40 Disfaji 249
Ikuo Hirano, Peter J. Kahrilas
Çeviri: Fatih Mehmet Sarı

41 Bulantı, Kusma ve Hazımsızlık 253
William L. Hasler
Çeviri: Fatih Mehmet Sarı

42 İshal ve Kabızlık 259
Michael Camilleri, Joseph A. Murray
Çeviri: Serdar Yaşar

43 İstemsiz Kilo Kaybı 270
J. Larry Jameson
Çeviri: Serdar Yaşar

44 Gastrointestinal Kanama 272
Loren Laine
Çeviri: Safa Dönmez

45 Sarılık 276
Savio John, Daniel S. Pratt
Çeviri: Safa Dönmez

46 Abdominal Şişkinlik ve Asit 281
Kathleen E. Corey, Lawrence S. Friedman
Çeviri: Mücahit Emet

ÜNİTE 7 Böbrek ve İdrar Yolu Fonksiyonunda Değişiklikler

47 Dizüri, Mesane Ağrısı ve İnterstisyel Sistit/ Mesane Ağrısı Sendromu 285
John W. Warren
Çeviri: Safa Dönmez

48 Azotemia and Urinary Abnormalities 288
David B. Mount
Çeviri: Mustafa Narin

49 Sıvı ve Elektrolit Bozuklukları 295
David B. Mount
Çeviri: Cihan Kunt, Mücahit Emet

50 Hiperkalsemi ve Hipokalsemi 312
Sundeep Khosla
Çeviri: Fatma Çakmak

51 Asidoz ve Alkaloz 315
Thomas D. DuBose, Jr.
Çeviri: Ayşe Karahasanoğlu

ÜNİTE 8 Derideki Değişiklikler

52 Deri Bozukluğu Olan Hastaya Yaklaşım 324
Kim B. Yancey, Thomas J. Lawley
Çeviri: Mehmet Akif Çakmak

53 Egzema, Psoriasis, Deri Enfeksiyonları, Akne ve Diğer Yaygın Cilt Hastalıkları 329
Leslie P. Lawley, Calvin O. McCall, Thomas J. Lawley
Çeviri: Ahmet Acar

54 İç Hastalıklarının Deri Bulguları 339
Jean L. Bolognia, Irwin M. Braverman
Çeviri: Serdar Yaşar

55 İmmünolojik İlişkili Cilt Hastalıkları 355
Kim B. Yancey, Thomas J. Lawley
Çeviri: Safa Dönmez

56 Deriyle İlgili İlaç Reaksiyonları 362
Robert G. Micheletti, Misha Rosenbach, Bruce U. Wintroub, Kanade Shinkai
Çeviri: Onur Can Kılınç

57 Işığa Karşı Duyarlılık ve Diğer Işık Reaksiyonları 372
Alexander G. Marneros, David R. Bickers
Çeviri: Onur Can Kılınç

ÜNİTE 9 Hematolojik Değişiklikler

58 Periferik Kan Yaymalarının Yorumlanması 379
Dan L. Longo
Çeviri: Arzu Akçay

59 Anemi ve Polisitemi 385
John W. Adamson, Dan L. Longo
Çeviri: Arzu Akçay

60 Granülosit ve Monosit Bozuklukları 394
Steven M. Holland, John I. Gallin
Çeviri: Arzu Akçay

61 Kanama ve Tromboz 404
Barbara A. Konkle
Çeviri: Arzu Akçay

62 Lenf Bezleri ve Dalak Büyümesi 411
Dan L. Longo
Çeviri: Arzu Akçay

KISIM 3 Farmakoloji

63 Klinik Farmakolojinin Temelleri 419
Dan M. Roden
Çeviri: Gaye Hafez

64 Farmakogenomik 429
Dan M. Roden
Çeviri: Korkut Ulucan

KISIM 4 Onkoloji ve Hematoloji

ÜNİTE 1 Neoplastik Bozukluklar

65 Kanser Hastasına Yaklaşım 435
Dan L. Longo
Çeviri: Senar Ebinç, Abdurrahman Işıkdoğan

66 Kanserin Önlenmesi ve Erken Tanısı 443
Jennifer M. Croswell, Otis W. Brawley, Barnett S. Kramer
Çeviri: Senar Ebinç, Abdurrahman Işıkdoğan

67 Kanser Genetiği..... 452
Fred Bunz, Bert Vogelstein
Çeviri: Oğur Karhan, M. Ali Kaplan

68 Kanser Hücre Biyolojisi 461
Jeffrey W. Clark, Dan L. Longo
Çeviri: Oğur Karhan, M. Ali Kaplan

69 Kanser Tedavisinin Prensipleri..... 480
Edward A. Sausville, Dan L. Longo
Çeviri: Yakup Ergün

70 Kanser Hastalarında Enfeksiyon 502
Robert W. Finberg
Çeviri: Sezai Tunç, Zuhat Urakçı

71 Onkolojik Aciller..... 511
Rasim Gucalp, Janice P. Dutcher
Çeviri: Ziya Kalkan, Zuhat Urakçı

72 Cilt Kanserleri..... 522
Brendan D. Curti, Sancy Leachman, Walter J. Urba
Çeviri: Senar Ebinç, Zeynep Oruç

73 Baş ve Boyun Kanserleri 532
Everett E. Vokes
Çeviri: Senar Ebinç, Zeynep Oruç

74 Akciğer Neoplazileri 537
Leora Horn, Christine M. Lovly
Çeviri: Serdar İleri, Mehmet Küçüköner

75 Meme Kanseri..... 555
Daniel F. Hayes, Marc E. Lippman
Çeviri: Yasin Sezgin, Mehmet Küçüköner

76 Üst Gastrointestinal Sistem Kanserler..... 566
Robert J. Mayer
Çeviri: Halis Yerlikaya

77 Alt Gastrointestinal Sistem Kanserler..... 572
Robert J. Mayer
Çeviri: Halis Yerlikaya

78 Karaciğer ve Safra Kanallarının Tümörleri..... 578
Josep M. Llovet
Çeviri: Fatma Yalçın Musri

79 Pankreas Kanseri..... 591
Daniel D. Von Hoff
Çeviri: Fatma Yalçın Musri

80 Gastrointestinal Sistem ve Pankreasın Nöroendokrin Tümörleri 596
Robert T. Jensen
Çeviri: Nadiye Akdeniz

81 Renal Hücreli Karsinom 616
Robert J. Motzer
Çeviri: Nadiye Akdeniz

82 Mesane ve Üriner Sistem Kanseri 619
Noah M. Hahn
Çeviri: Sezai Tunç, Zuhat Urakçı

83 Prostatın Benign ve Malign Hastalıkları..... 623
Howard I. Scher, James A. Eastham
Çeviri: Sezai Tunç, Zuhat Urakçı

84 Testis Kanseri 632
David J. Vaughn
Çeviri: Sezai Tunç, Muhammet Ali Kaplan

85 Jinekolojik Maligniteler 637
David Spriggs
Çeviri: Halis Yerlikaya

86 Sinir Sisteminin Primer ve Metastatik Tümörleri..... 643
Lisa M. DeAngelis, Patrick Y. Wen
Çeviri: Ziya Kalkan, Zeynep Oruç

87 Yumuşak Doku Sarkomları, Kemik Sarkomları ve Kemik Metastazları..... 653
Shreyaskumar R. Patel
Çeviri: Ziya Kalkan, Zuhat Urakçı

88 Primeri Bilinmeyen Karsinomlar..... 657
Gauri R. Varadhachary, James L. Abbruzzese
Çeviri: Serdar İleri, Mehmet Küçüköner

89 Paraneoplastik Sendromlar: Endokrinolojik/Hematolojik..... 662
J. Larry Jameson, Dan L. Longo
Çeviri: Yasin Sezgin, Mehmet Küçüköner

90 Paraneoplastik Nörolojik Sendromlar 668
Josep Dalmau, Myrna R. Rosenfeld
Çeviri: Yasin Sezgin, Mehmet Küçüköner

91 Kanser Tedavisinin Geç Dönem Sonuçları ve Tedavisi... 674
Carl E. Freter, Dan L. Longo
Çeviri: Serdar İleri, Mehmet Küçüköner

ÜNİTE 2 Hematopoetik Bozukluklar

92 Hematopoetik Kök Hücreler..... 679
David T. Scadden, Dan L. Longo
Çeviri: Orhan Ayyıldız, Oktay Bilgir

93 Demir Eksikliği Ve Diğer Hipoproliferatif Anemilers.... 683
John W. Adamson
Çeviri: Gürhan Kadıköylü, Sezen Kılıç Ar

94 Hemoglobin Bozuklukları..... 690
Edward J. Benz, Jr.
Çeviri: Gürhan Kadıköylü, Berivan Şenkaya

95 Megaloblastik Anemiler..... 698
A. Victor Hoffbrand
Çeviri: Gürhan Kadıköylü, Lales Yanık

96 Hemolitik Anemiler..... 708
Lucio Luzzatto
Çeviri: Gürhan Kadıköylü, Leyla Sayhan

97 Akut Kan Kaybına Bağlı Anemi 723
Dan L. Longo
Çeviri: Gürhan Kadıköylü

98 Aplastik Anemi ve Miyelodisplazi Dahil Kemik İliği Yetersizliği Sendromları 723
Neal S. Young
Çeviri: Gürhan Kadıköylü, Esra Pirinççi

99 Polisitemia Vera ve Diğer Myeloproliferatif Hastalıklar 733
Jerry L. Spivak
Çeviri: Abdullah Karakuş

100 Akut Miyeloid Lösemi..... 739
William Blum, Clara D. Bloomfield
Çeviri: Cihan Ural, Abdullah Karakuş

101 Kronik Miyeloid Lösemi 748
Hagop Kantarjian, Jorge Cortes
Çeviri: Cihan Ural, Abdullah Karakuş

102 Akut Lenfoid Lösemi.....757
Dieter Hoelzer
Çeviri: Cihan Ural, Abdullah Karakuş

103 Kronik Lenfositik Lösemi 763
Jennifer A. Woyach, John C. Byrd
Çeviri: Cihan Ural, Abdullah Karakuş

104 Non-Hodgkin Lenfoma 769
Caron A. Jacobson, Dan L. Longo
Çeviri: Vehbi Demircan, Abdullah Karakuş

105 Hodgkin Lenfoma 780
Caron A. Jacobson, Dan L. Longo
Çeviri: Vehbi Demircan, Abdullah Karakuş

106 Nadir Hematolojik Maligniteler 783
Ayalew Tefferi, Dan L. Longo
Çeviri: Mehmet Sıddık Dilek, Muhammed Emre Sevim

107 Plazma Hücre Hastalıkları 793
Nikhil C. Munshi, Dan L. Longo, Kenneth C. Anderson
Çeviri: Vehbi Demircan, Abdullah Karakuş

108 Amiloidoz 803
John L. Berk, Vaishali Sanchorawala
Çeviri: Sevgi Polat Bağcıer, Orhan Ayyıldız

109 Transfüzyon Biyolojisi ve Tedavisi 809
Jeffery S. Dzieczkowski, Pierre Tiberghien, Kenneth C. Anderson
Çeviri: Sevgi Polat Bağcıer, Orhan Ayyıldız

110 Hematopoietik Hücre Transplantasyonu 816
Frederick R. Appelbaum
Çeviri: Sevgi Polat Bağcıer, Orhan Ayyıldız

ÜNİTE 3 Hemostaz Bozuklukları

111 Trombosit ve Damar Duvarı Hastalıkları 822
Barbara A. Konkle
Çeviri: Sevgi Polat Bağcıer, Orhan Ayyıldız

112 Koagulasyon Bozuklukları 830
Valder R. Arruda, Katherine A. High
Çeviri: Şengül Baran Yerlikaya, Orhan Ayyıldız

113 Arteriyel ve Venöz Tromboz 839
Jane E. Freedman, Joseph Loscalzo
Çeviri: Şengül Baran Yerlikaya, Orhan Ayyıldız

114 Antitrombosit, Antikoagülan ve Fibrinolitik İlaçlar 843
Jeffrey I. Weitz
Çeviri: Şengül Baran Yerlikaya, Orhan Ayyıldız

KISIM 5 Enfeksiyon Hastalıkları

ÜNİTE 1 Enfeksiyon Hastalığı Olan Hastaya Yaklaşım

115 Enfeksiyon Hastalığı Olan Hastaya Yaklaşım 859
Neeraj K. Surana, Dennis L. Kasper
Çeviri: Tanju Kadir

116 Mikrobiyal Patogenezin Moleküler Mekanizmaları 866
Gerald B. Pier
Çeviri: Tanju Kadir

117 Akut Enfeksiyonlu Ateşli Hastaya Yaklaşım 877
Tamar F. Barlam, Dennis L. Kasper
Çeviri: Tanju Kadir

118 Aşılama Prensipleri ve Aşı Kullanımı 884
Nancy Messonnier, Anne Schuchat, Lisa A. Jackson
Çeviri: Tanju Kadir

119 Uluslararası Seyahat İçin Sağlık Önerileri 892
Jay S. Keystone, Phyllis E. Kozarsky
Çeviri: Tanju Kadir

120 İklim Değişikliği ve Enfeksiyon Hastalığı 900
Aaron S. Bernstein
Çeviri: Tanju Kadir

ÜNİTE 2 Klinik Sendromlar: Toplum Kökenli Enfeksiyonlar

121 Pnömoni 908
Lionel A. Mandell, Richard Wunderink
Çeviri: Tanju Kadir

122 Akciğer Apsesi 919
Rebecca M. Baron, Miriam Baron Barshak
Çeviri: Tanju Kadir

123 Enfektif Endokardit 921
Adolf W. Karchmer
Çeviri: Tanju Kadir

124 Deri, Kas ve Yumuşak Doku Enfeksiyonları 933
Dennis L. Stevens
Çeviri: Tanju Kadir

125 Enfeksiyöz Artrit 939
Lawrence C. Madoff
Çeviri: Tanju Kadir

126 Osteomiyelit 944
Werner Zimmerli
Çeviri: Tanju Kadir

127 İntraabdominal Enfeksiyonlar ve Apseler 952
Miriam Baron Barshak, Dennis L. Kasper
Çeviri: Tanju Kadir

128 Akut Enfeksiyöz İshal Hastalıkları ve Bakteriyel Gıda Zehirlenmesi 959
Richelle C. Charles, Stephen B. Calderwood, Regina C. LaRocque
Çeviri: Tanju Kadir

129 Clostridium Difficile Enfeksiyonu (Psödomembranöz Kolit Dahil) 964
Dale N. Gerding, Stuart Johnson
Çeviri: Tanju Kadir

130 İdrar Yolu Enfeksiyonları, Piyelonefrit ve Prostatit 968
Kalpana Gupta, Barbara W. Trautner
Çeviri: Tanju Kadir

131 Cinsel Yolla Bulaşan Enfeksiyonlar: Genel Bakış ve Klinik Yaklaşım 976
Jeanne M. Marrazzo, King K. Holmes
Çeviri: Tanju Kadir

132 Ensefalit 991
Karen L. Roos, Kenneth L. Tyler
Çeviri: Tanju Kadir

133 Akut Menenjit 998
Karen L. Roos, Kenneth L. Tyler
Çeviri: Tanju Kadir

134 Kronik ve Tekrarlayan Menenjit 1007
Walter J. Koroshetz, Michael R. Wilson, Avindra Nath
Çeviri: Tanju Kadir

135 Beyin Apsesi ve Ampiyem 1013
Karen L. Roos, Kenneth L. Tyler
Çeviri: Tanju Kadir

136 Isırıkların Enfeksiyöz Komplikasyonları 1019
Sandeep S. Jubbal, Florencia Pereyra, Lawrence C. Madoff
Çeviri: Tanju Kadir

ÜNİTE 3 Klinik Sendromlar: Sağlık Bakımıyla İlişkili

137 Sağlık Tesislerinde Edinilen Enfeksiyonlar 1022
Robert A. Weinstein
Çeviri: Tanju Kadir

138 Transplant Alıcılarında Enfeksiyonlar 1030
Robert W. Finberg, Joyce D. Fingeroth
Çeviri: Tanju Kadir

ÜNİTE 4 Bakteriyel Hastalıkların Tedavisi

139 Bakteriyel Enfeksiyonların Tedavisi ve Profilaksisi 1042
David C. Hooper, Erica S. Shenoy, Christy A. Varughese
Çeviri: Tanju Kadir

140 Antimikrobiyal Ajanlara Bakteri Direnci 1057
David C. Hooper
Çeviri: Tanju Kadir

ÜNİTE 5 Gram Pozitif Bakterilerin Neden Olduğu Hastalıklar

141 Pnömokok Enfeksiyonları 1062
David Goldblatt, Katherine L. O'Brien
Çeviri: Tanju Kadir

142 Stafilokok Enfeksiyonları..... 1071
Franklin D. Lowy
Çeviri: Tanju Kadir

143 Streptokok Enfeksiyonları 1081
Michael R. Wessels
Çeviri: Tanju Kadir

144 Enterokok Enfeksiyonları 1089
Cesar A. Arias, Barbara E. Murray
Çeviri: Tanju Kadir

145 Difteri ve Diğer Corynebacterium Enfeksiyonları..... 1095
William R. Bishai, John R. Murphy
Çeviri: Tanju Kadir

146 *Listeria monocytogenes* Enfeksiyonları..... 1100
Elizabeth L. Hohmann, Daniel A. Portnoy
Çeviri: Tanju Kadir

147 Tetanos 1102
C. Louise Thwaites, Lam Minh Yen
Çeviri: Tanju Kadir

148 Botulizm..... 1105
Agam K. Rao, Susan Maslanka
Çeviri: Tanju Kadir

149 Gazlı Gangren ve Diğer Klostridya Enfeksiyonları..... 1109
Amy E. Bryant, Dennis L. Stevens
Çeviri: Tanju Kadir

ÜNİTE 6 Gram Negatif Bakterilerin Neden Olduğu Hastalıklar

150 Meningokok Enfeksiyonları..... 1114
Andrew J. Pollard
Çeviri: Tanju Kadir

151 Gonokok Enfeksiyonları 1122
Sanjay Ram, Peter A. Rice
Çeviri: Tanju Kadir

152 *Haemophilus* ve *Moraxella* Enfeksiyonları 1129
Timothy F. Murphy
Çeviri: Tanju Kadir

153 HACEK Grubuna Bağlı Enfeksiyonlar ve Çeşitli Gram Negatif Bakteriler..... 1134
Tamar F. Barlam, Dennis L. Kasper
Çeviri: Tanju Kadir

154 *Legionella* Enfeksiyonları..... 1137
Victor L. Yu, M. Luisa Pedro-Botet, Yusen E. Lin
Çeviri: Tanju Kadir

155 Boğmaca ve Diğer *Bordetella* Enfeksiyonları..... 1142
Karina A. Top, Scott A. Halperin
Çeviri: Tanju Kadir

156 Gram Negatif Enterik Basillerin Neden Olduğu Hastalıklar 1146
Thomas A. Russo, James R. Johnson
Çeviri: Tanju Kadir

157 *Acinetobacter* Enfeksiyonları..... 1158
Rossana Rosa, L. Silvia Munoz-Price
Çeviri: Tanju Kadir

158 *Helicobacter pylori* Enfeksiyonları 1162
John C. Atherton, Martin J. Blaser
Çeviri: Tanju Kadir

159 *Pseudomonas, Burkholderia* ve *Stenotrophomonas* Türlerine Bağlı Enfeksiyonlar..... 1167
Reuben Ramphal
Çeviri: Tanju Kadir

160 Salmonelloz..... 1173
David A. Pegues, Samuel I. Miller
Çeviri: Tanju Kadir

161 Şigelloz 1180
Philippe J. Sansonetti, Jean Bergounioux
Çeviri: Tanju Kadir

162 *Campylobacter* ve İlgili Organizmalara Bağlı Enfeksiyonlar..... 1184
Beth D. Kirkpatrick, Martin J. Blaser
Çeviri: Tanju Kadir

163 Kolera ve Diğer Vibriyozlar 1186
Matthew K. Waldor, Edward T. Ryan
Çeviri: Tanju Kadir

164 Bruselloz..... 1192
Nicholas J. Beeching
Çeviri: Tanju Kadir

165 Tularemi 1196
Jeannine M. Petersen, Paul S. Mead
Çeviri: Tanju Kadir

166 Veba ve Diğer *Yersinia* Enfeksiyonları..... 1200
Michael B. Prentice
Çeviri: Tanju Kadir

167 *Bartonella* Enfeksiyonları, Kedi Tırmığı Hastalığı Dahil..... 1209
Michael Giladi, Moshe Ephros
Çeviri: Tanju Kadir

168 Donovanozis..... 1214
Nigel O'Farrell
Çeviri: Tanju Kadir

ÜNİTE 7 Çeşitli Bakteriyel Enfeksiyonlar

169 Nocardiosis..... 1215
Gregory A. Filice
Çeviri: Özlem Koca

170 Aktinomikoz 1220
Thomas A. Russo
Çeviri: Türkan Elif Taştan, Kenan Taştan

171 Whipple Hastalığı 1223
Thomas A. Russo
Çeviri: Mehmet Emin Layık

172 Karma Anaerop Organizmalara Bağlı Enfeksiyonlar... 1227
Neeraj K. Surana, Dennis L. Kasper
Çeviri: Tanju Kadir

ÜNİTE 8 Mikobakteriyel Hastalıklar

173 Tuberculosis 1236
Mario C. Raviglione
Çeviri: Ayşe Albayrak

174 Lepra 1259
Robert H. Gelber
Çeviri: Ayşe Albayrak

175 Nontüberküloz Mikobakteriyel Enfeksiyonlar 1266
Steven M. Holland
Çeviri: Ayşe Albayrak

176 Antimikobakteriyel İlaçlar 1270
Divya Reddy, Max R. O'Donnell
Çeviri: Ayşe Albayrak

ÜNİTE 9 Spiroket Hastalıkları

177 Sifilis 1279
Sheila A. Lukehart
Çeviri: Tanju Kadir

178 Endemik Treponematozlar 1286
Sheila A. Lukehart
Çeviri: Ersan Gürsoy

179 Leptospiroz 1290
Jiri F. P. Wagenaar, Marga G. A. Goris
Çeviri: Tanju Kadir

180 Dönek Ateş 1295
Alan G. Barbour
Çeviri: Mehmet Akif Nas

181 Lyme Hastalığı 1298
Allen C. Steere
Çeviri: Suat Sincan

ÜNİTE 10 Rickettsiae, Mycoplasmalar ve Chlamydiae'nın Neden Olduğu Hastalıklar

182 Riketsiya Hastalıkları 1303
David H. Walker, J. Stephen Dumler, Lucas S. Blanton, Thomas Marrie
Çeviri: Tanju Kadir

183 Mycoplasmaların Neden Olduğu Enfeksiyonlar 1313
R. Doug Hardy
Çeviri: Gül Aydın Tığlı

184 Klamidya Enfeksiyonları 1316
Charlotte A. Gaydos, Thomas C. Quinn
Çeviri: Tanju Kadir

ÜNİTE 11 Viral Hastalıklar: Genel Bilgiler

185 Tıbbi Viroloj 1325
Fred Wang, Elliott Kieff
Çeviri: Ülkü Altoparlak

186 Antiretroviral İlaçlar Dışında Antiviral Kemoterapi 1334
Lindsey R. Baden
Çeviri: Ülkü Altoparlak

ÜNİTE 12 DNA Virüslerine Bağlı Enfeksiyorlar

187 Herpes Simpleks Virüs Enfeksiyonları 1345
Lawrence Corey
Çeviri: Tanju Kadir

188 Varicella-Zoster Virüs Enfeksiyonları 1354
Richard J. Whitley
Çeviri: Murat Aydın

189 Epstein-Barr Virüs Enfeksiyonları, Enfeksiyöz Mononükleozis Dahil 1358
Jeffrey I. Cohen
Çeviri: Cemile Aylin Erman Daloğlu

190 Sitomegalovirüs ve İnsan Herpes Virüsü Tip 6, 7 ve 8 .. 1361
Camille Nelson Kotton, Martin S. Hirsch
Çeviri: Cemile Aylin Erman Daloğlu

191 Molluscum Contagiosum, Monkeypox ve Diğer Poksvirüs Enfeksiyonları 1366
Fred Wang
Çeviri: Mehmet Akif Nas

192 Parvovirüs Enfeksiyonları 1367
Kevin E. Brown
Çeviri: Türkan Elif Taştan, Kenan Taştan

193 İnsan Papillomavirus Enfeksiyonları 1370
Darron R. Brown, Aaron Ermel
Çeviri: Esra Çınar Tanrıverdi

ÜNİTE 13 Solunum Yolu DNA ve RNA Virusları

194 Yaygın Viral Solunum Yolu Enfeksiyonları 1375
James E. Crowe, Jr.
Çeviri: Zülal Özkurt

195 İnfluenza (Grip) 1382
Peter F. Wright
Çeviri: Zülal Özkurt

ÜNİTE 14 İnsan İmmün Yetmezlik Virusu ve Diğer İnsan Retroviruslarına Bağlı Enfeksiyonlar

196 İnsan Retrovirusları 1388
Dan L. Longo, Anthony S. Fauci
Çeviri: Kübra Şahin

197 Human Immunodeficiency Virus Hastalığı: AIDS ve İlgili Bozukluklar 1393
Anthony S. Fauci, Gregory K. Folkers, H. Clifford Lane
Çeviri: Kübra Şahin

ÜNİTE 15 RNA Virüslerinin Neden Olduğu Enfeksiyonlar

198 Viral Gastroenteritler 1463
Umesh D. Parashar, Roger I. Glass
Çeviri: İdeal Beraa Yılmaz Kartal

199 Enterovirüs, Parechovirüs ve Reovirüs Enfeksiyonları 1468
Jeffrey I. Cohen
Çeviri: Tanju Kadir

200 Kızamık (Rubeola) 1474
Kaitlin Rainwater-Lovett, William J. Moss
Çeviri: Mustafa Bayraktar

201 Kızamıkçık (Alman Kızamığı) 1478
Laura A. Zimmerman, Susan E. Reef
Çeviri: Esra Çınar Tanrıverdi

202 Kabakulak 1481
Steven A. Rubin
Çeviri: Emine Parlak

203 Kuduz ve Diğer Rabdovirus Enfeksiyonları 1484
Alan C. Jackson
Çeviri: Mustafa Bayraktar

204 Artropod Kaynaklı ve Kemirgen Kaynaklı Virüs Enfeksiyonları 1489
Jens H. Kuhn, Rémi N. Charrel
Çeviri: Zülal Özkurt

205 Ebolavirüs ve Marburgvirüs Enfeksiyonları 1509
Jens H. Kuhn
Çeviri: Tanju Kadir

ÜNİTE 16 Mantar Enfeksiyonları

206 Mantar Enfeksiyonların Tanı ve Tedavisi 1515
John E. Edwards, Jr.
Çeviri: Nurten Nur Aydın

207 Histoplazmoz 1518
Chadi A. Hage, L. Joseph Wheat
Çeviri: Orhan Delice

208 Koksidiyoidomikoz 1521
Neil M. Ampel
Çeviri: Aysun Aras

209 Blastomikoz 1524
S. Travis King, Rathel L. Nolan, III
Çeviri: Şenol Arslan

210 Kriptokokoz 1526
Arturo Casadevall
Çeviri: Tanju Kadir

211 Kandidiyazis 1529
John E. Edwards, Jr.
Çeviri: Esra Çınar Tanrıverdi

212 Aspergilloz 1532
David W. Denning
Çeviri: Gülden Sincan

213 Mukormikoz 1537
Brad Spellberg, Ashraf S. Ibrahim
Çeviri: Sibel Güçlü Utlu

214 Yüzeyel Mikozlar ve Daha Az Yaygın Sistemik Mikozlar 1541
Carol A. Kauffman
Çeviri: Nazım Onur Can

215 ***Pneumocystis*** Enfeksiyonları 1547
Alison Morris, Henry Masur
Çeviri: Tanju Kadir

ÜNİTE 17 Protozoal ve Helmintik Enfeksiyonlar: Genel Hususlar

216 Parazitik Enfeksiyonlara Giriş 1551
Sharon L. Reed, Charles E. Davis
Çeviri: Zülal Özkurt

217 Parazit Enfeksiyonlarını Tedavi Etmek İçin Kullanılan Ajanlar 1556
Thomas A. Moore
Çeviri: Tanju Kadir

ÜNİTE 18 Protozoal Enfeksiyonlar

218 Amebiasis ve Serbest Yaşayan Amip Enfeksiyonları 1568
Rosa M. Andrade, Sharon L. Reed
Çeviri: Osman Aktaş

219 Sıtma 1575
Nicholas J. White, Elizabeth A. Ashley
Çeviri: Osman Aktaş

220 Babesiyoz 1590
Edouard Vannier, Peter J. Krause
Çeviri: Osman Aktaş

221 Leyşmaniaz 1594
Shyam Sundar
Çeviri: Osman Aktaş

222 Şagas Hastalığı ve Afrika Tripanozomiyazı 1601
François Chappuis, Yves Jackson
Çeviri: Osman Aktaş

223 ***Toxoplasma*** Enfeksiyonları 1609
Kami Kim
Çeviri: Osman Aktaş

224 Protozoal Bağırsak Enfeksiyonları ve Trikomoniyaz 1615
Peter F. Weller
Çeviri: Osman Aktaş

ÜNİTE 19 Helmintik Enfeksiyonlar

225 Helmintik Enfeksiyonlara Giriş 1620
Peter F. Weller
Çeviri: Hakan Uslu

226 Trişenellozis ve Diğer Doku Nematod Enfeksiyonları 1621
Peter F. Weller
Çeviri: Hakan Uslu

227 Bağırsak (İntestinal) Nematod Enfeksiyonları 1625
Peter F. Weller, Thomas B. Nutman
Çeviri: Hakan Uslu

228 Filaryal ve İlişkili Enfeksiyonlar 1629
Thomas B. Nutman, Peter F. Weller
Çeviri: Hakan Uslu

229 Şistozomiyazis ve Diğer Trematod Enfeksiyonları 1635
Birgitte Jyding Vennervald
Çeviri: Hakan Uslu

230 Sestod Enfeksiyonları 1641
A. Clinton White, Jr., Peter F. Weller
Çeviri: Hakan Uslu

KISIM 6 Kardiyovasküler Sistem Bozuklukları

ÜNİTE 1 Kardiyovasküler Hastalıklara Giriş

231 Kardiyovasküler Hastalık Şüphesi Olan Hastaya Yaklaşımı 1649
Joseph Loscalzo
Çeviri: Sinem Özyılmaz

232 Kardiyovasküler Sistemin Temel Biyolojisi 1651
Joseph Loscalzo, Peter Libby, Calum A. MacRae
Çeviri: Sinem Özyılmaz

233 Kardiyovasküler Hastalık Epidemiyolojisi 1662
Thomas A. Gaziano, J. Michael Gaziano
Çeviri: Sinem Özyılmaz

ÜNİTE 2 Kardiyovasküler Bozuklukların Tanısı

234 Kardiyovasküler Sistemin Fizik Muayenesi 1666
Patrick T. O'Gara, Joseph Loscalzo
Çeviri: Sinem Özyılmaz

235 Elektrokardiyografi 1675
Ary L. Goldberger
Çeviri: Sinem Özyılmaz

236 Noninvaziv Kardiyak Görüntüleme: Ekokardiyografi, Nükleer Kardiyoloji ve Manyetik Rezonans/Bilgisayarlı Tomografi Görüntüleme 1683
Marcelo F. Di Carli, Raymond Y. Kwong, Scott D. Solomon
Çeviri: Sinem Özyılmaz

237 Tanısal Kardiyak Kateterizasyon ve Koroner Anjiyografi 1709
Jane A. Leopold, David P. Faxon
Çeviri: Sinem Özyılmaz

ÜNİTE 3 Ritim Bozuklukları

238 Elektrofizyolojinin İlkeleri 1716
David D. Spragg, Gordon F. Tomaselli
Çeviri: Sinem Özyılmaz

239 Bradiaritmiler: Sinoatriyal Düğüm Bozuklukları 1722
David D. Spragg, Gordon F. Tomaselli
Çeviri: Sinem Özyılmaz

240 Bradiaritmiler: Atriyoventriküler Düğüm Bozuklukları..... 1727
David D. Spragg, Gordon F. Tomaselli
Çeviri: Sinem Özyılmaz

241 Supraventriküler Taşiaritmilere Yaklaşım 1733
Gregory F. Michaud, William G. Stevenson
Çeviri: Sinem Özyılmaz

242 Fizyolojik ve Fizyolojik Olmayan Sinüs Taşikardisi 1735
Gregory F. Michaud, William G. Stevenson
Çeviri: Sinem Özyılmaz

243 Fokal Atriyal Taşikardi 1736
Gregory F. Michaud, William G. Stevenson
Çeviri: Sinem Özyılmaz

244 Paroksismal Supraventriküler Taşikardiler 1739
Gregory F. Michaud, William G. Stevenson
Çeviri: Sinem Özyılmaz

245 Yaygın Atriyal Flutter, Makroreentran ve Multifokal Atriyal Taşikardiler 1743
Gregory F. Michaud, William G. Stevenson
Çeviri: Sinem Özyılmaz

246 Atriyal Fibrilasyon 1746
Gregory F. Michaud, William G. Stevenson
Çeviri: Sinem Özyılmaz

247 Ventriküler Aritmilere Yaklaşım 1750
Roy M. John, William G. Stevenson
Çeviri: Sinem Özyılmaz

248 Erken Ventriküler Atımlar, Süreksiz Ventriküler Taşikardi ve İdioventriküler Ritim 1755
Roy M. John, William G. Stevenson
Çeviri: Sinem Özyılmaz

249 Sürekli Ventriküler Taşikardi 1757
Roy M. John, William G. Stevenson
Çeviri: Sinem Özyılmaz

250 Polimorfik Ventriküler Taşikardi ve Ventriküler Fibrilasyon..... 1759
Roy M. John, William G. Stevenson
Çeviri: Sinem Özyılmaz

251 Elektrik Fırtınası ve Kesintisiz (Incessant) VT 1762
Roy M. John, William G. Stevenson
Çeviri: Sinem Özyılmaz

ÜNİTE 4 Kalp Bozuklukları

252 Kalp Yetersizliği: Patofizyoloji ve Tanı 1763
Douglas L. Mann, Murali Chakinala
Çeviri: Sinem Özyılmaz

253 Kalp Yetersizliği: Tedavi..... 1769
Mandeep R. Mehra
Çeviri: Sinem Özyılmaz

254 Kardiyomiyopati ve Miyokardit 1779
Neal K. Lakdawala, Lynne Warner Stevenson, Joseph Loscalzo
Çeviri: Sinem Özyılmaz

255 Kalp Nakli ve Uzun Süreli Yardımlı Dolaşım..... 1797
Mandeep R. Mehra
Çeviri: Sinem Özyılmaz

256 Aort Kapağı Hastalığı 1802
Patrick T. O'Gara, Joseph Loscalzo
Çeviri: Sinem Özyılmaz

257 Aort Yetersizliği..... 1809
Patrick T. O'Gara, Joseph Loscalzo
Çeviri: Sinem Özyılmaz

258 Mitral Stenoz..... 1813
Patrick T. O'Gara, Joseph Loscalzo
Çeviri: Sinem Özyılmaz

259 Mitral Yetersizlik..... 1818
Patrick T. O'Gara, Joseph Loscalzo
Çeviri: Sinem Özyılmaz

260 Mitral Kapak Prolapsusu 1821
Patrick T. O'Gara, Joseph Loscalzo
Çeviri: Sinem Özyılmaz

261 Triküspid Kapak Hastalığı..... 1823
Patrick T. O'Gara, Joseph Loscalzo
Çeviri: Sinem Özyılmaz

262 Pulmoner Kapak Hastalıkları..... 1826
Patrick T. O'Gara, Joseph Loscalzo
Çeviri: Sinem Özyılmaz

263 Multipl ve Karma Valvüler Kalp Hastalığı 1827
Patrick T. O'Gara, Joseph Loscalzo
Çeviri: Sinem Özyılmaz

264 Erişkinlerde Konjenital Kalp Hastalığı 1829
Anne Marie Valente, Michael J. Landzberg
Çeviri: Sinem Özyılmaz

265 Perikardiyal Hastalıklar..... 1841
Eugene Braunwald
Çeviri: Sinem Özyılmaz

266 Atriyal Miksoma ve Diğer Kardiyak Tümörler 1847
Eric H. Awtry
Çeviri: Sinem Özyılmaz

ÜNİTE 5 Koroner ve Periferik Damar Hastalığı

267 İskemik Kalp Hastalığı..... 1850
Elliott M. Antman, Joseph Loscalzo
Çeviri: Sinem Özyılmaz

268 ST-Segment Yükselmesiz Akut Koroner Sendrom (ST-Segment Yükselmesiz Miyokard İnfarktüsü ve Kararsız Angina)..... 1866
Robert P. Giugliano, Christopher P. Cannon, Eugene Braunwald
Çeviri: Sinem Özyılmaz

269 ST-Segment Yükselmeli Miyokard İnfarktüsü 1872
Elliott M. Antman, Joseph Loscalzo
Çeviri: Sinem Özyılmaz

270 Perkütan Koroner Müdahaleler ve Diğer Müdahale Prosedürleri..... 1885
David P. Faxon, Deepak L. Bhatt
Çeviri: Sinem Özyılmaz

271 Hipertansif Vasküler Hastalık 1890
Theodore A. Kotchen
Çeviri: Sinem Özyılmaz

272 Renovasküler Hastalık 1906
Stephen C. Textor
Çeviri: Sinem Özyılmaz

273 Derin Venöz Tromboz ve Akciğer Tromboembolizmi.. 1910
Samuel Z. Goldhaber
Çeviri: Sinem Özyılmaz

274 Aort Hastalıkları 1917
Mark A. Creager, Joseph Loscalzo
Çeviri: Sinem Özyılmaz

275 Ekstremitelerin Arteriyal Hastalıkları 1923
Mark A. Creager, Joseph Loscalzo
Çeviri: Sinem Özyılmaz

276 Kronik Venöz Hastalık ve Lenfödem..... 1930
Mark A. Creager, Joseph Loscalzo
Çeviri: Sinem Özyılmaz

277 Pulmoner Hipertansiyon 1935
Aaron B. Waxman, Joseph Loscalzo
Çeviri: Sinem Özyılmaz

KISIM 7 Solunum Sistemi Hastalıkları

ÜNİTE 1 Akciğer Hastalıklarının Tanısı

278 Solunum Sistemi Hastalıklarında Hastaya Yaklaşım.... 1943
Patricia A. Kritek, Bruce D. Levy
Çeviri: Cüneyt Tetikkurt

279 Solunum Fonksiyon Bozuklukları..... 1945
Edward T. Naureckas, Julian Solway
Çeviri: Cüneyt Tetikkurt

280 Solunum Sistemi Hastalıklarında Tanısal Girişimler... 1951
Anne L. Fuhlbrigge, Augustine M. K. Choi
Çeviri: Cüneyt Tetikkurt

ÜNİTE 2 Solunum Sistemi Hastalıkları

281 Astım 1957
Peter J. Barnes
Çeviri: Cüneyt Tetikkurt

282 Hipersensitivite Pnömonitisi ve Eozinofilik Pulmoner İnfiltrasyonlar 1970
Praveen Akuthota, Michael E. Wechsler
Çeviri: Cüneyt Tetikkurt

283 Mesleksel ve Çevresel Akciğer Hastalıkları 1976
John R. Balmes
Çeviri: Cüneyt Tetikkurt

284 Bronşiektazi..... 1983
Rebecca M. Baron, Miriam Baron Barshak
Çeviri: Cüneyt Tetikkurt

285 Kistik Fibrozis 1986
Eric J. Sorscher
Çeviri: Cüneyt Tetikkurt

286 Kronik Obstruktif Akciğer Hastalığı..... 1990
Edwin K. Silverman, James D. Crapo, Barry J. Make
Çeviri: Cüneyt Tetikkurt

287 İnterstisyel Akciğer Hastalıkları..... 1999
Gary M. Hunninghake, Ivan O. Rosas
Çeviri: Cüneyt Tetikkurt

288 Plevra Hastalıkları 2006
Richard W. Light
Çeviri: Cüneyt Tetikkurt

289 Mediasten Hastalıkları..... 2009
Richard W. Light
Çeviri: Cüneyt Tetikkurt

290 Ventilasyon Bozuklukları 2010
John F. McConville, Julian Solway, Babak Mokhlesi
Çeviri: Cüneyt Tetikkurt

291 Uyku Apne..... 2013
Andrew Wellman, Susan Redline
Çeviri: Cüneyt Tetikkurt

292 Akciğer Transpantasyonu 2018
Elbert P. Trulock, III
Çeviri: Cüneyt Tetikkurt

KISIM 8 Yoğun Bakım

ÜNİTE 1 Solunumsal Kritik Bakım

293 Kritik Hastalığı Olan Hastaya Yaklaşım..... 2023
John P. Kress, Jesse B. Hall
Çeviri: Aytaç Yücel

294 Akut Solunum Sıkıntısı Sendromu..... 2030
Rebecca M. Baron, Bruce D. Levy
Çeviri: Zeliha Korkmaz Dişli, Aytaç Yücel

295 Mekanik Ventilatör Desteği 2035
Bartolome R. Celli
Çeviri: Deccane Düzenci, Ayşe Belin Özer

ÜNİTE 2 Şok ve Kardiyak Arrest

296 Şoklu Hastaya Yaklaşım 2039
Anthony F. Massaro
Çeviri: Selçuk Demircan, Mustafa Said Aydoğan

297 Sepsis ve Septik Şok..... 2044
Christopher W. Seymour, Derek C. Angus
Çeviri: Mustafa Said Aydoğan

298 Kardiyojenik Şok ve Pulmoner Ödem 2052
David H. Ingbar, Holger Thiele
Çeviri: Serkan Kalkan, Mustafa Said Aydoğan

299 Kardiyovasküler Kollaps, Kardiyak Arrest ve Ani Kardiyak Ölüm..... 2059
Christine M. Albert, William G. Stevenson
Çeviri: Serkan Kalkan, Ayşe Belin Özer

ÜNİTE 3 Nörolojik Kritik Bakım

300 Koma 2068
S. Andrew Josephson, Allan H. Ropper, Stephen L. Hauser
Çeviri: Murat Bıçakcıoğlu

301 Şiddetli Akut Ensefalopatiler ve Kritik Hastalık Güçsüzlüğü..... 2074
J. Claude Hemphill, III, Wade S. Smith, S. Andrew Josephson, Daryl R. Gress
Çeviri: Murat Bıçakcıoğlu

302 Subaraknoid Kanama 2084
J. Claude Hemphill, III, Wade S. Smith, Daryl R. Gress
Çeviri: Selçuk Demircan, Ayşe Belin Özer

KISIM 9 Böbrek ve İdrar Yolları Hastalıkları

303 Böbreğin Hücresel ve Moleküler Biyolojisi 2089
Alfred L. George, Jr., Eric G. Neilson
Çeviri: Meryem Benzer

304 Akut Böbrek Hasarı **2099**
Sushrut S. Waikar, Joseph V. Bonventre
Çeviri: Meryem Benzer

305 Kronik Böbrek Hastalığı **2111**
Joanne M. Bargman, Karl L. Skorecki
Çeviri: Meryem Benzer

306 Böbrek Yetersizliği Tedavisinde Diyaliz **2121**
Kathleen D. Liu, Glenn M. Chertow
Çeviri: Meryem Benzer

307 Böbrek Yetersizliği Tedavisinde Transplantasyon **2126**
Jamil Azzi, Edgar L. Milford, Mohamed H. Sayegh, Anil Chandraker
Çeviri: Meryem Benzer

308 Glomerüler Hastalıklar **2132**
Julia B. Lewis, Eric G. Neilson
Çeviri: Meryem Benzer

309 Polikistik Böbrek Hastalığı ve Tübülüs Büyüme ve Gelişiminin Diğer Kalıtsal Bozuklukları **2150**
Jing Zhou, Martin R. Pollak
Çeviri: Meryem Benzer

310 Böbreğin Tübülointerstisyel Hastalıkları **2157**
Laurence H. Beck, Jr., David J. Salant
Çeviri: Meryem Benzer

311 Böbreğin Vasküler Bozuklukları **2164**
Ronald S. Go, Nelson Leung
Çeviri: Meryem Benzer

312 Nefrolitiyazis **2168**
Gary C. Curhan
Çeviri: Meryem Benzer

313 İdrar Yolu Obstrüksiyonu (İYO) **2173**
Julian L. Seifter
Çeviri: Meryem Benzer

KISIM 10 Gastrointestinal Sistem Hastalıkları

ÜNİTE 1 Sindirim Kanalı Hastalıkları

314 Gastrointestinal Hastalığı Olan Hastaya Yaklaşım **2177**
William L. Hasler, Chung Owyang
Çeviri: İbrahim Ertuğrul

315 Gastrointestinal Endoskopi **2182**
Louis Michel Wong Kee Song, Mark Topazian
Çeviri: İbrahim Ertuğrul

316 Özofagus Hastalıkları **2209**
Peter J. Kahrilas, Ikuo Hirano
Çeviri: İbrahim Ertuğrul

317 Peptik Ülser Hastalığı ve İlişkili Hastalıklar **2220**
John Del Valle
Çeviri: İbrahim Ertuğrul

318 Absorpsiyon Bozuklukları **2244**
Henry J. Binder
Çeviri: İbrahim Ertuğrul

319 İnflamatuvar Bağırsak Hastalığı **2258**
Sonia Friedman, Richard S. Blumberg
Çeviri: İbrahim Ertuğrul

320 İrritabl Bağırsak Sendromu **2276**
Chung Owyang
Çeviri: İbrahim Ertuğrul

321 Divertiküler Hastalık ve Yaygın Anorektal Hastalıklar **2283**
Rizwan Ahmed, Susan L. Gearhart
Çeviri: İbrahim Ertuğrul

322 Mezenterik Vasküler Yetersizlik **2291**
Satinderjit Locham, Mahmoud Malas
Çeviri: İbrahim Ertuğrul

323 Akut İntestinal Obstrüksiyon **2294**
Danny O. Jacobs
Çeviri: İbrahim Ertuğrul

324 Akut Apandisit ve Peritonit **2298**
Danny O. Jacobs
Çeviri: İbrahim Ertuğrul

ÜNİTE 2 Beslenme

325 Besinsel Gereksinimler ve Diyetin Değerlendirmesi **2303**
Johanna Dwyer
Çeviri: İbrahim Ertuğrul

326 Vitamin ve Eser Elementlerin Fazlalığı ve Eksikliği **2309**
Paolo M. Suter, Robert M. Russell
Çeviri: İbrahim Ertuğrul

327 Malnutrisyon ve Beslenmenin Değerlendirmesi **2319**
Gordon L. Jensen
Çeviri: İbrahim Ertuğrul

328 Enteral ve Parenteral Beslenme **2324**
L. John Hoffer, Bruce R. Bistrian, David F. Driscoll
Çeviri: İbrahim Ertuğrul

ÜNİTE 3 Karaciğer ve Safra Yolu Hastalığı

329 Karaciğer Hastalığı Olan Hastaya Yaklaşım **2332**
Marc G. Ghany, Jay H. Hoofnagle
Çeviri: İbrahim Ertuğrul

330 Karaciğer Fonksiyonunun Değerlendirilmesi **2338**
Daniel S. Pratt
Çeviri: İbrahim Ertuğrul

331 Hiperbilirübinemiler **2342**
Allan W. Wolkoff
Çeviri: İbrahim Ertuğrul

332 Akut Viral Hepatit **2347**
Jules L. Dienstag
Çeviri: İbrahim Ertuğrul

333 Toksik ve İlaca Bağlı Hepatit **2366**
William M. Lee, Jules L. Dienstag
Çeviri: İbrahim Ertuğrul

334 Kronik Hepatit **2375**
Jules L. Dienstag
Çeviri: İbrahim Ertuğrul

335 Alkolik Karaciğer Hastalığı **2399**
Mark E. Mailliard, Michael F. Sorrell
Çeviri: İbrahim Ertuğrul

336 Alkolik Olmayan Yağlı Karaciğer Hastalıkları ve Alkolik Olmayan Steatohepatit **2401**
Manal F. Abdelmalek, Anna Mae Diehl
Çeviri: İbrahim Ertuğrul

337 Siroz ve Komplikasyonları **2405**
Bruce R. Bacon
Çeviri: İbrahim Ertuğrul

338 Karaciğer Transplantasyonu **2414**
Raymond T. Chung, Jules L. Dienstag
Çeviri: İbrahim Ertuğrul

339 Safra Kesesi ve Safra Kanalları Hastalıkları 2422
Norton J. Greenberger, Gustav Paumgartner
Çeviri: İbrahim Ertuğrul

ÜNİTE 4 Pankreas Hastalıkları

340 Pankreas Hastalığı Olan Hastaya Yaklaşım 2433
Darwin L. Conwell, Norton J. Greenberger, Peter A. Banks
Çeviri: İbrahim Ertuğrul

341 Akut ve Kronik Pankreatit 2437
Darwin L. Conwell, Peter A. Banks, Norton J. Greenberger
Çeviri: İbrahim Ertuğrul

KISIM 11 İmmün Aracılı, İnflamatuvar ve Romatolojik Hastalıklar

ÜNİTE 1 Sağlık ve Hastalıkta Bağışıklık Sistemi

342 İmmün-Aracılı, İnflamatuvar ve Romatolojik Hastalıklar 2451
Barton F. Haynes, Kelly A. Soderberg, Anthony S. Fauci
Çeviri: Ömer Cevit

343 Majör Doku Uygunluğu (Histokompatibilite) Kompleksi 2480
Gerald T. Nepom
Çeviri: Ömer Cevit

344 Primer İmmün Yetersizlik Hastalıkları 2488
Alain Fischer
Çeviri: Ömer Cevit

ÜNİTE 2 İmmün-Aracılı Hasar Hastalıkları

345 Ürtiker, Anjioödem ve Alerjik Rinit 2498
Katherine N. Cahill, Joshua A. Boyce
Çeviri: Mahmut Doğru

346 Anafilaksi 2506
David Hong, Joshua A. Boyce
Çeviri: Mahmut Doğru

347 Mastositoz 2508
Cem Akin, Joshua A. Boyce
Çeviri: Aslı Ece Karadavut

348 Otoimmünite ve Otoimmün Hastalıklar 2510
Betty Diamond, Peter E. Lipsky
Çeviri: Aslı Ece Karadavut

349 Sistemik Lupus Eritematozus 2515
Bevra Hannahs Hahn
Çeviri: Aslı Ece Karadavut

350 Antifosfolipid Sendromu 2526
Haralampos M. Moutsopoulos
Çeviri: Başak Funda Eken

351 Romatoid Artrit 2527
Ankoor Shah, E. William St. Clair
Çeviri: Başak Funda Eken

352 Akut Romatizmal Ateş 2541
Jonathan R. Carapetis
Çeviri: Ömer Cevit

353 Sistemik Skleroz (Skleroderma) ve İlişkili Bozukluklar 2546
John Varga
Çeviri: Ömer Cevit

354 Sjögren Sendromu 2560
Haralampos M. Moutsopoulos
Çeviri: Beste Tacal Aslan

355 Spondiloartritler 2563
Joel D. Taurog
Çeviri: Başak Funda Eken

356 Vaskülit Sendromları 2574
Carol A. Langford, Anthony S. Fauci
Çeviri: Başak Funda Eken

357 Behçet Sendromu 2589
Haralampos M. Moutsopoulos
Çeviri: Ömer Cevit

358 İnflamatuvar Miyopatiler 2590
Steven A. Greenberg, Anthony A. Amato
Çeviri: Ömer Cevit

359 Tekrarlayıcı Polikondrit 2597
Carol A. Langford
Çeviri: Başak Funda Eken

360 Sarkoidoz 2600
Robert P. Baughman, Elyse E. Lower
Çeviri: Ömer Cevit

361 IgG4 ile İlişkili Hastalık 2607
John H. Stone
Çeviri: Ömer Cevit

362 Ailesel Akdeniz Ateşi ve Diğer Kalıtsal Otoinflamatuar Hastalıklar 2610
Daniel L. Kastner
Çeviri: Ömer Cevit

ÜNİTE 3 Eklem ve Komşu Dokuların Hastalıkları

363 Eklem ve Kas-İskelet Hastalıklarına Yaklaşım 2614
John J. Cush
Çeviri: Ömer Cevit

364 Osteoartrit 2624
David T. Felson, Tuhina Neogi
Çeviri: Başak Funda Eken

365 Gut ve Diğer Kristal İlişkili Artropatiler 2631
H. Ralph Schumacher, Lan X. Chen
Çeviri: Başak Funda Eken

366 Fibromiyalji 2636
Leslie J. Crofford
Çeviri: Başak Funda Eken

367 Sistemik Hastalıklarla İlişkili Artrit ve Diğer Artritler 2639
Carol A. Langford, Brian F. Mandell
Çeviri: Ömer Cevit

368 Ekstremitelerin Periartiküler Bozuklukları 2646
Carol A. Langford
Çeviri: Başak Funda Eken

KISIM 12 Endokrin ve Metabolizma

ÜNİTE 1 Endokrinoloji

369 Endokrin Bozukluğu Olan Hastaya Yaklaşım 2649
J. Larry Jameson
Çeviri: Ziya Kalkan

370 Hormonların Etki Mekanizmaları 2653
J. Larry Jameson
Çeviri: Ziya Kalkan

371 Anterior Hipofiz Hormonların Fizyolojisi 2659
Shlomo Melmed, J. Larry Jameson
Çeviri: Sedat Çetin

372 Hipopitüitarizm 2664
Shlomo Melmed, J. Larry Jameson
Çeviri: Sedat Çetin

373 Hipofiz Tümör Sendromları 2670
Shlomo Melmed, J. Larry Jameson
Çeviri: Hikmet Soylu

374 Nörohipofiz Bozuklukları 2684
Gary L. Robertson
Çeviri: Dilek Geneş

375 Tiroid Bezi Fizyolojisi ve Testi 2692
J. Larry Jameson, Susan J. Mandel, Anthony P. Weetman
Çeviri: Dilek Geneş

376 Hipotiroidi 2698
J. Larry Jameson, Susan J. Mandel, Anthony P. Weetman
Çeviren: Mehmet Şimşek

377 Hipertiroidi 2703
J. Larry Jameson, Susan J. Mandel, Anthony P. Weetman
Çeviren: Mehmet Şimşek

378 Tiroid Nodüler Hastalığı ve Tiroid Kanseri 2710
J. Larry Jameson, Susan J. Mandel, Anthony P. Weetman
Çeviri: Tuğba Tezer Kalkan

379 Adrenal Korteks Hastalıkları 2719
Wiebke Arlt
Çeviri: Hüsna Saraçoğlu

380 Feokromasitoma 2739
Hartmut P. H. Neumann
Çeviren: Zafer Pekkolay

381 Multipl Endokrin Neoplazi 2746
R. V. Thakker
Çeviren: Zafer Pekkolay

382 Otoimmun Poliglandüler Sendromlar 2756
Peter A. Gottlieb, Aaron W. Michels
Çeviren: Zafer Pekkolay

ÜNİTE 2 Seks ve Cinsiyete Dayalı Tıp

383 Cinsel Gelişim Bozuklukları 2760
John C. Achermann, J. Larry Jameson
Çeviri: Kader Uğur

384 Testis ve Erkek Üreme Sistemi Bozuklukları 2769
Shalender Bhasin, J. Larry Jameson
Çeviri: Kader Uğur

385 Kadın Üreme Sistemi Bozuklukları 2787
Janet E. Hall
Çeviri: Kader Uğur

386 Menstrüel Düzensizlikler ve Pelvik Ağrı 2794
Janet E. Hall
Çeviri: Kader Uğur

387 Hirsutizm 2799
David A. Ehrmann
Çeviri: Kader Uğur

388 Menopoz ve Postmenopozal Hormon Tedavisi 2803
JoAnn E. Manson, Shari S. Bassuk
Çeviri: Halise Çınar Yavuz

389 İnfertilite ve Kontrasepsiyon 2810
Janet E. Hall
Çeviri: Halise Çınar Yavuz

390 Seksüel Disfonksiyon 2816
Kevin T. McVary
Çeviri: Şerife Nur Boysan

391 Kadın Sağlığı 2823
Andrea Dunaif
Çeviri: Şerife Nur Boysan

392 Erkek Sağlığı 2828
Shalender Bhasin, Shehzad Basaria
Çeviri: Hatice Öner, Mazhar Müslüm Tuna

393 Lezbiyen, Gey, Biseksüel ve Transseksüel Sağlığı 2835
Baligh R. Yehia, Harvey J. Makadon
Çeviri: Seçkin Akçay, Mazhar Müslüm Tuna

ÜNİTE 3 Obezite, Diabetes Mellitus ve Metabolik Sendrom

394 Obezitenin Patobiyolojisi 2837
Jeffrey S. Flier, Eleftheria Maratos-Flier
Çeviri: Nevzat Gözel, Erkan Çakmak

395 Obezitenin Değerlendirilmesi ve Yönetimi 2843
Robert F. Kushner
Çeviri: Nevzat Gözel, Erkan Çakmak

396 Diabetes Mellitus: Tanı, Sınıflama ve Patofizyoloji 2850
Alvin C. Powers, Kevin D. Niswender, Carmella Evans-Molina
Çeviri: Nevzat Gözel, Erkan Çakmak

397 Diabetes Mellitus: Yönetimi ve Tedavileri 2859
Alvin C. Powers, Kevin D. Niswender, Michael R. Rickels
Çeviri: Nevzat Gözel, Erkan Çakmak

398 Diyabetes Mellitus: Komplikasyonlar 2875
Alvin C. Powers, John M. Stafford, Michael R. Rickels
Çeviri: Nevzat Gözel, Erkan Çakmak

399 Hipoglisemi 2883
Philip E.Cryer, Stephen N. Davis
Çeviri: Nevzat Gözel, Erkan Çakmak

400 Lipoprotein Metabolizması Bozuklukları 2889
Daniel J. Rader, Sekar Kathiresan
Çeviri: Nevzat Gözel, Erkan Çakmak

401 Metabolik Sendrom 2903
Robert H. Eckel
Çeviri: Nevzat Gözel, Erkan Çakmak

ÜNİTE 4 Kemik ve Mineral Metabolizması Bozuklukları

402 Sağlık ve Hastalıkta Kemik ve Mineral Metabolizması. 2909
F. Richard Bringhurst, Marie B. Demay, Henry M. Kronenberg
Çeviri: Faruk Kılınç

403 Paratiroid Bezi Hastalıkları Kalsiyum Homeostazı 2921
John T. Potts, Jr., Harald W. Jüppner
Çeviri: Faruk Kılınç

404 Osteoporoz 2942
Robert Lindsay, Felicia Cosman
Çeviri: Ömercan Topaloğlu

405 Paget Hastalığı ve Kemiğin Diğer Displazileri 2959
Murray J. Favus, Tamara J. Vokes
Çeviri: Ömercan Topaloğlu

ÜNİTE 5 Ara (İntermediyer) Metabolizma Hastalıkları

406 Kalıtsal Bağ Doku Hastalıkları 2967
Darwin J. Prockop, John F. Bateman
Çeviri: Ali Gürel

407 Hemokromatozis 2977
Lawrie W. Powell
Çeviri: Ali Gürel, Mehmet Sarıaydın

408 Wilson Hastalığı 2982
George J. Brewer
Çeviri: Ali Gürel, Mehmet Sarıaydın

409 Porfirialar 2984
Robert J. Desnick, Manisha Balwani
Çeviri: Ali Gürel, Mehmet Sarıaydın

410 Pürin Ve Primidin Metabolizması Bozuklukları 2997
John N. Mecchella, Christopher M. Burns
Çeviri: Ali Gürel

411 Lizozomal Depo Hastalıklar 3003
Robert J. Hopkin, Gregory A. Grabowski
Çeviri: Ali Gürel

412 Kojen Depo Hastalıkları ve Diğer Kalıtsal Karbonhidrat Metabolizması Bozuklukları 3009
Priya S. Kishnani, Yuan-Tsong Chen
Çeviri: Ali Gürel

413 Yetişkinlerde Kalıtımsal Amino Asit Metabolizması Bozuklukları 3015
Nicola Longo
Çeviri: Ali Gürel

414 Kalıtsal Membran Transport Bozuklukları 3020
Nicola Longo
Çeviri: Ali Gürel

KISIM 13 Nörolojik Hastalıklar

ÜNİTE 1 Nörolojik Hastalıkların Tanısı

415 Nörolojik Hastalığı Olan Hastaya Yaklaşım 3025
Daniel H. Lowenstein, Joseph B. Martin, Stephen L. Hauser
Çeviri: Aylin Öztürk Yavuz

416 Nörolojik Bozukluklarda Nörogörüntüleme 3030
William P. Dillon
Çeviri: Aylin Öztürk Yavuz

417 Nörolojik Hastalıkların Patobiyolojisi 3039
Stephen L. Hauser, Arnold R. Kriegstein, Stanley B. Prusiner
Çeviri: Aylin Öztürk Yavuz

ÜNİTE 2 Sinir Sisteminin Hastalıkları

418 Nöbetler ve Epilepsi 3050
Daniel H. Lowenstein
Çeviri: Aylin Öztürk Yavuz

419 Serebrovasküler Hastalıklar 3068
Wade S. Smith, S. Claiborne Johnston, J. Claude Hemphill, III
Çeviri: Aylin Öztürk Yavuz

420 İskemik İnme 3079
Wade S. Smith, S. Claiborne Johnston, J. Claude Hemphill, III
Çeviri: Aylin Öztürk Yavuz

421 İntrakraniyal Kanama 3091
Wade S. Smith, J. Claude Hemphill, III, S. Claiborne Johnston
Çeviri: Aylin Öztürk Yavuz

422 Migren ve Diğer Primer Baş Ağrısı Bozuklukları 3096
Peter J. Goadsby
Çeviri: Aylin Öztürk Yavuz

423 Alzheimer Hastalığı (AH) 3108
William W. Seeley, Bruce L. Miller
Çeviri: Aylin Öztürk Yavuz

424 Frontotemporal Demans 3115
William W. Seeley, Bruce L. Miller
Çeviri: Aylin Öztürk Yavuz

425 Vasküler Demans 3118
Joel Kramer, William W. Seeley, Bruce L. Miller
Çeviri: Aylin Öztürk Yavuz

426 Lewy Cisimcikli Demans 3119
William W. Seeley, Caroline M. Tanner, Bruce L. Miller
Çeviri: Aylin Öztürk Yavuz

427 Parkinson Hastalığı 3120
C. Warren Olanow, Christine Klein, Anthony H. V. Schapira
Çeviri: Aylin Öztürk Yavuz

428 Tremor, Kore ve Diğer Hareket Bozuklukları 3132
C. Warren Olanow, Christine Klein, Jose A. Obeso
Çeviri: Aylin Öztürk Yavuz

429 Amiyotrofik Lateral Skleroz ve Diğer Motor Nöron Hastalıkları 3141
Robert H. Brown, Jr.
Çeviri: Aylin Öztürk Yavuz

430 Prion Hastalıkları 3148
Stanley B. Prusiner, Bruce L. Miller
Çeviri: Aylin Öztürk Yavuz

431 Ataksik Bozukluklar 3154
Roger N. Rosenberg
Çeviri: Aylin Öztürk Yavuz

432 Otonom Sinir Sisteminin Bozuklukları 3158
Christopher H. Gibbons, John W. Engstrom
Çeviri: Aylin Öztürk Yavuz

433 Trigeminal Nevralji, Bell Paralizi ve Diğer Kraniyal Sinir Bozuklukları 3166
M. Flint Beal, Stephen L. Hauser
Çeviri: Aylin Öztürk Yavuz

434 Spinal Kord Hastalıkları 3172
Stephen L. Hauser
Çeviri: Aylin Öztürk Yavuz

435 Konküzyon ve Diğer Travmatik Beyin Yaralanmaları .. 3183
Geoffrey T. Manley, Stephen L. Hauser, Michael McCrea
Çeviri: Aylin Yavuz Öztürk

436 Multipl Skleroz 3188
Bruce A. C. Cree, Stephen L. Hauser
Çeviri: Aylin Öztürk Yavuz

437 Nöromiyelitis Optika 3202
Bruce A. C. Cree, Stephen L. Hauser
Çeviri: Aylin Öztürk Yavuz

ÜNİTE 3 Sinir ve Kas Bozuklukları

438 Periferik Nöropati 3204
Anthony A. Amato, Richard J. Barohn
Çeviri: Aylin Öztürk Yavuz

439 Guillain-Barré Sendromu ve Diğer İmmün Aracılı Nöropatiler 3225
Stephen L. Hauser, Anthony A. Amato
Çeviri: Aylin Öztürk Yavuz

440 Miyasteni Gravis ve Nöromüsküler Kavşaktaki Diğer Hastalıklar 3232
Anthony A. Amato
Çeviri: Aylin Öztürk Yavuz

441 Müsküler Distrofiler ve Diğer Kas Hastalıkları 3239
Anthony A. Amato, Robert H. Brown, Jr.
Çeviri: Aylin Öztürk Yavuz

ÜNİTE 4 Kronik Yorgunluk Sendromu

442 Kronik Yorgunluk Sendromu 3254
Gijs Bleijenberg, Jos W. M. van der Meer
Çeviri: Aylin Öztürk Yavuz

ÜNİTE 5 Psikiyatrik ve Bağımlılıkla İlişkili Bozukluklar

443 Psikiyatrik Bozuklukların Biyolojisi 3256
Robert O. Messing, Eric J. Nestler, Matthew W. State
Çeviri: Aylin Öztürk Yavuz

444 Psikiyatrik Bozukluklar 3262
Victor I. Reus
Çeviri: Aylin Öztürk Yavuz

445 Alkol ve Alkol Kullanım Bozuklukları 3277
Marc A. Schuckit
Çeviri: Aylin Öztürk Yavuz

446 Opioid İle İlişkili Bozukluklar 3284
Thomas R. Kosten, Colin N. Haile
Çeviri: Aylin Öztürk Yavuz

447 Kokain ve Sıkça Kullanılan Diğer Maddeler 3287
Karran A. Phillips, Antonello Bonci
Çeviri: Aylin Öztürk Yavuz

448 Nikotin Bağımlılığı 3292
David M. Burns
Çeviri: Aylin Öztürk Yavuz

KISIM 14 Zehirlenmeler, İlaç Dozaşımları ve Envenomasyonları (Sokularak Zehirlenmeler)

449 Ağır Metal Zehirlenmesi 3297
Howard Hu
Çeviri: Teoman Akçay

450 Poisoning and Drug Overdose 3300
Mark B. Mycyk

451 Zehirli Yılan Sokmaları ve Deniz Hayvanlarına Maruziyetin Neden Olduğu Hastalıklar 3313
Charles Lei, Kirsten B. Hornbeak, Paul S. Auerbach, Robert L. Norris
Çeviri: Teoman Akçay

452 Ektoparazit Enfestasyonları ve Eklem Bacaklı Yaralanmaları 3324
Richard J. Pollack, Scott A. Norton
Çeviri: Teoman Akçay

KISIM 15 Çevresel Maruziyetlerle İlişkili Hastalıklar

453 İrtifa (Rakım) ile İlişkili Hastalıklar 3333
Buddha Basnyat, Geoffrey Tabin
Çeviri: Teoman Akçay

454 Hipotermi ve Periferik Soğuk Yaralanmaları 3338
Daniel F. Danzl
Çeviri: Teoman Akçay

455 Isı (Sıcaklık) ile İlgili Hastalıklar 3343
Daniel F. Danzl
Çeviri: Teoman Akçay

KISIM 16 Genler, Çevre ve Hastalık

456 İnsan Genetiğinin İlkeleri 3347
J. Larry Jameson, Peter Kopp
Çeviri: Korkut Ulucan

457 Klinik Tıpta Genetiğin Uygulanması 3369
Susan M. Domchek, J. Larry Jameson, Susan Miesfeldt
Çeviri: Korkut Ulucan

458 Klinik Tıpta Gen ve Hücre Bazlı Tedavi 3375
Katherine A. High, Malcolm K. Brenner
Çeviren: Özlem Özge Yılmaz

459 İnsan Mikrobiyomu 3379
Neeraj K. Surana, Dennis L. Kasper
Çeviri: Hatice Yaşar Arsu

KISIM 17 Küresel Tıp

460 Tıpta Küresel Meseleler 3391
Joseph J. Rhatigan, Paul Farmer
Çeviri: Mustafa Çelik

461 Enfeksiyon Hastalıkları Paternlerindeki Dünya Genelinde Yaşanan Değişiklikler 3401
George W. Rutherford, Jaime Sepulveda
Çeviri: Mustafa Çelik

462 Birinci Basamak ve Küresel Sağlık 3404
Tim Evans, Kumanan Rasanathan
Çeviri: Mustafa Çelik

KISIM 18 Yaşlanmak

463 Yaşlanmanın Biyolojisi 3413
Rafael de Cabo, David G. Le Couteur
Çeviri: Korkut Ulucan

464 Yaşlanma Süreciyle İlişkili Klinik Problemler 3420
Joseph G. Ouslander, Bernardo Reyes
Çeviri: Mustafa Çelik

KISIM 19 Konsültasyon Tıbbı

465 Medikal Konsültasyona Yaklaşım 3439
Jack Ende, Jeffrey Berns
Çeviri: Mustafa Çelik

466 Gebelik Sırasındaki Medikal Bozukluklar 3440
Robert L. Barbieri, John T. Repke
Çeviri: Mustafa Çelik

467 Cerrahi Hastanın Medikal Değerlendirmesi 3446
Prashant Vaishnava, Kim A. Eagle
Çeviri: Mustafa Çelik

KISIM 20 Yeni Keşifler

468 Davranış Ekonomisi ve Sağlık 3453
Kevin G. Volpp, George Loewenstein, David A. Asch
Çeviri: Mustafa Çelik

469 Tamamlayıcı, Alternatif ve Bütünleyici Sağlık Yaklaşımları 3462
Josephine P. Briggs
Çeviri: Mustafa Çelik

470 Telomer Hastalığı 3466
Rodrigo T. Calado, Neal S. Young
Çeviri: Mustafa Çelik

471 Hastalıkta ve Tedavide Epigenetiğin Rolü 3471
Brian C. Capell, Shelley L. Berger
Çeviri: Korkut Ulucan

472 Mitokondriyal DNA ve Kalıtımsal Özellikler 3476
Karl L. Skorecki, Bruce H. Cohen
Çeviri: Korkut Ulucan

473 Klinik Tıpta Kök Hücre Biyolojisinin Uygulamaları 3488
John A. Kessler
Çeviri: Korkut Ulucan

474 Mikrobiyal Genomik ve Enfeksiyon Hastalığı 3491
Roby P. Bhattacharyya, Yonatan H. Grad, Deborah T. Hung
Çeviri: Korkut Ulucan

475 Sirkadyen Biyolojinin Hastalıkta ve Sağlıkta Rolü 3504
Jonathan Cedernaes, Kathryn Moynihan Ramsey, Joseph Bass
Çeviri: Mustafa Çelik

476 Ağ Tıbbı: Sağlık ve Hastalıkta Sistemler Biyolojisi 3515
Joseph Loscalzo
Çeviri: Mustafa Çelik

477 Gelişmekte Olan Nöroterapötik Teknolojiler 3522
Jyoti Mishra, Karunesh Ganguly
Çeviri: Mustafa Çelik

İndeks I-1

James L. Abbruzzese, MD, FACP, FASCO, DSc (hon)
Duke Cancer Institute Distinguished Professor of Medical Oncology; Chief, Division of Medical Oncology, Department of Medicine;
Associate Director for Clinical Research and Training, Duke Cancer Institute, Duke University Medical Center, Durham,
North Carolina [88]

Manal F. Abdelmalek, MD, MPH
Associate Professor of Medicine, Division of Gastroenterology and Hepatology, Duke University, Durham, North Carolina [336]

John C. Achermann, MD, PhD, MB
Wellcome Trust Senior Research Fellow in Clinical Science, University College London; Professor of Paediatric Endocrinology, UCL GOS Institute of Child Health, University College London, London,
United Kingdom [383]

John W. Adamson, MD
Clinical Professor, Division of Hematology/Oncology, Department of Medicine, University of California at San Diego, San Diego, California [59, 93]

Rizwan Ahmed, MD
Resident in Plastic and Reconstructive Surgery, Department of Surgery, Duke University, Durham, North Carolina [321]

Cem Akin, MD, PhD
Professor of Medicine, Department of Internal Medicine, Division of Allergy and Clinical Immunology, University of Michigan, Ann Arbor, Michigan [347]

Praveen Akuthota, MD
Associate Clinical Professor, Division of Pulmonary, Critical Care & Sleep Medicine, University of California, San Diego, San Diego,
California [282]

Christine M. Albert, MD, MPH
Professor of Medicine, Harvard Medical School; Staff Physician, Brigham and Women's Hospital, Boston, Massachusetts [299]

Anthony A. Amato, MD
Professor of Neurology, Harvard Medical School; Vice-Chairman, Department of Neurology, Brigham and Women's Hospital, Boston, Massachusetts [358, 438-441]

Michael J. Aminoff, MD, DSc, FRCP
Professor of Neurology, School of Medicine, University of California, San Francisco, San Francisco, California [21, 22]

Neil M. Ampel, MD
Professor of Medicine, University of Arizona; Staff Physician, Southern Arizona Veterans Affairs Health Care System, Tucson, Arizona [208]

Kenneth C. Anderson, MD
Kraft Family Professor of Medicine, Harvard Medical School; Chief, Jerome Lipper Multiple Myeloma Center, Dana-Farber Cancer Institute, Boston, Massachusetts [107, 109]

Rosa M. Andrade, MD
Assistant Professor of Medicine, Department of Medicine, Division of Infectious Diseases, Microbiology and Molecular Genetics, PRIME-LC, University of California, Irvine; Irvine, California [218]

Derek C. Angus, MD, MPH
Distinguished Professor and Mitchell P. Fink Endowed Chair, Department of Critical Care Medicine University of Pittsburgh Schools of the Health Sciences, Pittsburgh, Pennsylvania [297]

Elliott M. Antman, MD
Professor of Medicine, Cardiovascular Division, Department of Medicine, Brigham and Women's Hospital; Associate Dean for Clinical/Translational Research, Harvard Medical School, Boston, Massachusetts [267, 269]

Frederick R. Appelbaum, MD
Deputy Director, Fred Hutchinson Cancer Research Center, Seattle, Washington [110]

Cesar A. Arias, MD, PhD, MSc, FIDSA
Professor of Medicine, Microbiology and Molecular Genetics; Director, Center for Antimicrobial Resistance and Microbial Genomics, McGovern Medical School at the University of Texas Health Science Center; Adjunct Professor, MD Anderson Cancer Center, Houston, Texas; Director, Molecular Genetics and Antimicrobial Unit and International Center for Microbial Genomics, Universidad, El Bosque, Bogota, Colombia [144]

Wiebke Arlt, MD, DSc, FRCP, FMedSci
William Withering Chair of Medicine, Institute of Metabolism and Systems Research, University of Birmingham; Consultant Endocrinologist, University Hospital Birmingham, Birmingham, United Kingdom [379]

Katrina A. Armstrong, MD
Physician-in-Chief, Department of Medicine, Massachusetts General Hospital, Charlestown HealthCare Center, Charlestown,
Massachusetts [4]

Valder R. Arruda, MD, PhD
Associate Professor, Division of Hematology, Department of Pediatrics, Perelman School of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania [112]

Andrew W. Artenstein, MD
Chief Physician Executive and Chief Academic Officer, Baystate Health; Regional Executive Dean and Professor of Medicine,
University of Massachusetts Medical School—Baystate, Springfield, Massachusetts [S5]

David A. Asch, MD, MBA
Executive Director, Penn Medicine Center for Health Care Innovation; Physician, Cresencz Philadelphia VA Medical Center; John Morgan Professor of Medicine, Medical Ethics and Health Policy, Health Care Management, and Operations, Information and Decisions, Perelman School of Medicine and Wharton School, University of Pennsylvania, Philadelphia, Pennsylvania [468]

Elizabeth A. Ashley, MB, BS, PhD, MRCP, FRCPath
Center for Tropical Medicine and Global Health, University of Oxford, Oxford, United Kingdom [219]

John C. Atherton, MD, FRCP
Professor of Gastroenterology; Pro-Vice-Chancellor and Dean of the Faculty of Medicine and Health Sciences, University of Nottingham, Nottingham, United Kingdom [158]

Paul S. Auerbach, MD, MS, FACEP, MFAWM, FAAEM
Redich Family Professor, Department of Emergency Medicine, Stanford University School of Medicine, Stanford, California [451]

Eric H. Awtry, MD
Associate Professor of Medicine, Boston University School of Medicine, Cardiology Division, Boston Medical Center, Boston, Massachusetts [266, S8]

Jamil Azzi, MD
Assistant Professor of Medicine, Harvard Medical School; Director, Renal Transplant Fellowship, Associate Physician, Schuster Family Transplantation Research Center, Brigham and Women's Hospital, Boston, Massachusetts [307]

Bruce R. Bacon, MD
James F. King, MD Endowed Chair in Gastroenterology; Professor of Internal Medicine, Saint Louis University Liver Center, Saint Louis University School of Medicine, St. Louis, Missouri [337]

Lindsey R. Baden, MD
Associate Professor of Medicine, Harvard Medical School; Dana-Farber Cancer Institute, Brigham and Women's Hospital, Boston, Massachusetts [186]

Jessica M. Baker, MD
Fellow in Movement Disorders, Department of Neurology, Brigham and Women's Hospital, Boston, Massachusetts [23]

John R. Balmes, MD
Professor of Medicine, University of California, San Francisco; Professor, School of Public Health, University of California, Berkeley; Attending Physician, Division of Occupational and Environmental Medicine, San Francisco General Hospital, San Francisco, California [283]

Manisha Balwani, MD, MS
Associate Professor, Department of Genetics and Genomic Sciences and Medicine, Icahn School of Medicine at Mount Sinai, New York, New York [409]

Peter A. Banks, MD
Professor of Medicine, Harvard Medical School; Senior Physician, Division of Gastroenterology, Brigham and Women's Hospital, Boston, Massachusetts [340, 341]

Robert L. Barbieri, MD
Kate Macy Ladd Professor of Obstetrics, Gynecology and Reproductive Biology, Harvard Medical School; Chair, Department of Obstetrics and Gynecology, Brigham and Women's Hospital, Boston, Massachusetts [466]

Alan G. Barbour, MD
Professor of Medicine and Microbiology and Molecular Genetics, University of California Irvine, Irvine, California [180]

Joanne M. Bargman, MD, FRCPC
Professor of Medicine; Director, Clinical Fellowship in Nephrology, University of Toronto; Staff Nephrologist; Director, Peritoneal Dialysis Program; Co-Director, Renal-Rheumatology Lupus Clinic, University Health Network; Past-President, International Society for Peritoneal Dialysis, Toronto, Ontario, Canada [305]

Tamar F. Barlam, MD, MSc
Associate Professor of Medicine, Infectious Disease Section, Boston University School of Medicine, Boston, Massachusetts [117, 153]

Peter J. Barnes, FRS, F Med Sci
Margaret Turner-Warwick Professor of Medicine; Head, Respiratory Medicine, Imperial College of London; Airway Disease Section, NHL Institute, London, United Kingdom [281]

Richard J. Barohn, MD
Gertrude and Dewey Ziegler Professor of Neurology; University Distinguished Professor; Vice Chancellor of Research; President Research Institute; Director, Frontiers: Heartland Institute for Clinical and Translational Research, University of Kansas Medical Center, Kansas City, Kansas [438]

Rebecca M. Baron, MD
Assistant Professor of Medicine, Harvard Medical School; Associate Physician, Brigham and Women's Hospital, Division of Pulmonary and Critical Care Medicine, Department of Medicine, Boston, Massachusetts [33, 122, 284, 294]

Miriam Baron Barshak, MD
Assistant Professor, Harvard Medical School; Physician, Massachusetts General Hospital, Boston, Massachusetts [122, 127, 284]

Shehzad Basaria, MD
Associate Professor of Medicine, Harvard Medical School; Associate Director, Section on Men's Health, Aging and Metabolism, Brigham and Women's Hospital, Boston, Massachusetts [392]

Buddha Basnyat, MD, MSc, FACP, FRCP (Edinburgh)
Director, Oxford University Clinical Research Unit, Patan Academy of Health Sciences; Centre for Tropical Medicine and Global Health, Nuffield Department of Clinical Medicine, University of Oxford, Oxford, United Kingdom; Medical Director, Nepal International Clinic and Himalaya Rescue Association, Kathmandu, Nepal [453]

Joseph Bass, MD, PhD
Division of Endocrinology, Metabolism and Molecular Medicine, Department of Medicine, Feinberg School of Medicine, Department of Neurobiology, Northwestern University, Chicago, Illinois [475]

Shari S. Bassuk, ScD
Epidemiologist, Division of Preventive Medicine, Brigham and Women's Hospital, Boston, Massachusetts [388]

John F. Bateman, PhD
Theme Director, Cell Biology; Group Leader, Musculoskeletal Research, Murdoch Children's Research Institute, The Royal Children's Hospital, Parkville, Victoria, Australia [406]

David W. Bates, MD, MSc
Professor of Medicine, Harvard Medical School; Chief, General Internal Medicine and Primary Care Division, Brigham and Women's Hospital; Medical Director, Clinical and Quality Analysis, Partners HealthCare System, Inc., Boston, Massachusetts [6]

Robert P. Baughman, MD
Department of Internal Medicine, University of Cincinnati Medical Center, Cincinnati, Ohio [360]

M. Flint Beal, MD
University Professor of Neurology and Neuroscience; Chairman Emeritus; Neurologist, New York Presbyterian Hospital; Weill Cornell Medical College, New York, New York [433]

Laurence H. Beck, Jr., MD, PhD
Associate Professor of Medicine, Boston University School of Medicine, Boston, Massachusetts [310]

Nicholas J. Beeching, MA, BM BCh, FRCP, FRACP, FFTM RCPS(Glasg), FCCP (Hon), FESCMID, DCH, DTM&H
Senior Lecturer (Clinical) in Infectious Diseases, Liverpool School of Tropical Medicine; National Institute for Health Research Health Protection Research Unit in Emerging and Zoonotic Infections, Liverpool; Honorary Consultant in Infectious Diseases, Tropical and Infectious Disease Unit, Royal Liverpool University Hospital; Honorary Consultant, Public Health England and Honorary Civilian Consultant in Infectious Diseases, Army Medical Directorate, United Kingdom [164]

Michael H. Bennett, MD, MBBS, MM (Clin Epi)
Conjoint Professor in Anesthesia and Hyperbaric Medicine; Faculty of Medicine, University of New South Wales; Academic Head of Department, Wales Anaesthesia, Prince of Wales Hospital, Sydney, Australia [S11]

Edward J. Benz, Jr., MD
Richard and Susan Smith Distinguished Professor of Medicine; Professor of Pediatrics and Genetics, Harvard Medical School; President and CEO Emeritus, Dana-Farber Cancer Institute; Director and Principal Investigator Emeritus, Dana-Farber/Harvard Cancer Center, Boston, Massachusetts [94]

Shelley L. Berger, PhD
Daniel S. Och University Professor, Departments of Cell and Developmental Biology; Biology; Genetics; Director, Penn Epigenetics Institute, University of Pennsylvania Perelman School of Medicine, Philadelphia, Pennsylvania [471]

Jean Bergounioux, MD, PhD, PhC
Pediatric Intensive Care Unit, Hôpital Raymond-Poincaré, Université de Versailles-Saint Quentin, Garches, France [161]

John L. Berk, MD
Associate Professor of Medicine, Boston University School of Medicine; Assistant Director, Amyloidosis Center, Boston Medical Center, Boston, Massachusetts [108]

Jeffrey Berns, MD
Professor of Medicine and Pediatrics; Associate Chief, Renal Electrolyte and Hypertension Division; Associate Dean for Graduate Medical Education, Perelman School of Medicine of the University of Pennsylvania, Philadelphia, Pennsylvania [465]

Aaron S. Bernstein, MD, MPH
Pediatric Hospitalist, Boston Children's Hospital; Associate Director, Center for Health and the Global Environment, Harvard T.H. Chan School of Public Health; Instructor, Harvard Medical School, Boston, Massachusetts [120]

Joseph R. Betancourt, MD, MPH
Associate Professor of Medicine, Harvard Medical School; Director, The Disparities Solutions Center, Massachusetts General Hospital, Boston, Massachusetts [7]

Atul K. Bhan, MBBS, MD
Professor of Pathology, Harvard Medical School, Associate Director, Center for the Study of Inflammatory Bowel Disease, Massachusetts General Hospital, Boston, Massachusetts [A13]

Shalender Bhasin, MB, BS
Professor of Medicine, Harvard Medical School; Director, Research Program in Men's Health: Aging and Metabolism; Director, Boston Claude D. Pepper Older Americans Independence Center; Brigham and Women's Hospital, Boston, Massachusetts [384, 392]

Deepak L. Bhatt, MD, MPH
Professor of Medicine, Harvard Medical School; Executive Director of Interventional Cardiovascular Programs, Brigham and Women's Hospital Heart and Vascular Center, Boston, Massachusetts [270, A11]

Roby P. Bhattacharyya, MD, PhD
Instructor in Medicine, Harvard Medical School; Assistant in Medicine, Division of Infectious Disease, Massachusetts General Hospital, Boston, Massachusetts [474]

David R. Bickers, MD
Carl Truman Nelson Professor and Chair, Department of Dermatology, Columbia University Medical Center, New York, New York [57]

Henry J. Binder, MD
Professor Emeritus of Medicine, Senior Research Scientist, Yale University, New Haven, Connecticut [318]

William R. Bishai, MD, PhD
Professor and Co-Director, Center for Tuberculosis Research, Department of Medicine, Division of Infectious Diseases, Johns Hopkins University School of Medicine, Baltimore, Maryland [145]

Bruce R. Bistrian, MD, PhD, MPH
Professor of Medicine, Harvard Medical School; Chief, Clinical Nutrition, Beth Israel Deaconess Medical Center, Boston, Massachusetts [328]

Lucas S. Blanton, MD
Assistant Professor, Division of Infectious Diseases, University of Texas Medical Branch, Galveston, Texas [182]

Martin J. Blaser, MD
Muriel and George Singer Professor of Medicine; Professor of Microbiology; Director, Human Microbiome Program, New York University Langone Medical Center, New York, New York [158, 162]

Chantal P. Bleeker-Rovers, MD, PhD
Department of Internal Medicine, Radboud University Medical Center, Nijmegen, The Netherlands [17]

Gijs Bleijenberg, PhD
Professor Emeritus, Expert Centre for Chronic Fatigue, Radboud University Medical Centre, Nijmegen, The Netherlands [442]

Clara D. Bloomfield, MD
Distinguished University Professor; William G. Pace, III Professor of Cancer Research; Cancer Scholar and Senior Advisor, The Ohio State University Comprehensive Cancer Center; Arthur G. James Cancer Hospital and Richard J. Solove Research Institute, Columbus, Ohio [100]

William Blum, MD
Director, Acute Leukemia Program; Professor, Department of Hematology and Oncology, Winship Cancer Institute and Emory University, Atlanta, Georgia [100]

Richard S. Blumberg, MD
Chief, Division of Gastroenterology, Hepatology and Endoscopy, Brigham and Women's Hospital, Professor of Medicine, Harvard Medical School, Boston, Massachusetts [319]

Jean L. Bolognia, MD
Professor, Department of Dermatology, Yale University School of Medicine, New Haven, Connecticut [54]

Antonello Bonci, MD
Scientific Director, National Institute on Drug Abuse, National Institutes of Health, Baltimore, Maryland [447]

Joseph V. Bonventre, MD, PhD
Samuel L. Levine Professor of Medicine; Chief, Renal Division; Chief, Engineering in Medicine Division, Brigham and Women's Hospital, Boston, Massachusetts [304]

Joshua A. Boyce, MD
Professor of Medicine and Pediatrics; Albert L. Sheffer Professor of Medicine, Harvard Medical School; Director, Inflammation and Allergic Disease Research Section, Brigham and Women's Hospital, Boston, Massachusetts [345-347]

Anna K. Brady, MD
Fellow, Division of Pulmonary and Critical Care Medicine, University of Washington Medical Center, Seattle, Washington [35]

Eugene Braunwald, MD, MA (Hon), ScD (Hon), FRCP
Distinguished Hersey Professor of Medicine, Harvard Medical School; Founding Chairman, TIMI Study Group, Brigham and Women's Hospital, Boston, Massachusetts [37, 265, 268]

Irwin M. Braverman, MD
Professor Emeritus; Senior Research Scientist, Department of Dermatology, Yale University School of Medicine, New Haven, Connecticut [54]

Otis W. Brawley, MD, MACP
Professor of Hematology, Medical Oncology, Medicine and Epidemiology, Emory University; Chief Medical and Scientific Officer, American Cancer Society, Atlanta, Georgia [66]

Joel G. Breman, MD, DTPH
Senior Scientist Emeritus, Fogarty International Center, National Institutes of Health, Bethesda, Maryland [A6]

Malcolm K. Brenner, MB, PhD
Center for Cell and Gene Therapy, Baylor College of Medicine, Houston, Texas [458]

George J. Brewer, MD
Morton S. and Henrietta K. Sellner Emeritus, Professor of Human Genetics, Emeritus Professor of Internal Medicine, University of Michigan Medical School, Ann Arbor, Michigan [408]

Josephine P. Briggs, MD
Director, National Center for Complementary and Integrative Health (NCCIH) at the National Institutes of Health (NIH), Bethesda, Maryland [469]

F. Richard Bringhurst, MD
Associate Professor of Medicine, Harvard Medical School; Physician, Massachusetts General Hospital, Boston, Massachusetts [402]

Steven M. Bromley, MD
Director, South Jersey MS Center, Bromley Neurology PC, Audubon, New Jersey [29]

Darron R. Brown, MD, MPH
Professor of Medicine; Professor of Microbiology and Immunology; Adjunct Professor of Epidemiology; Member, Simon Cancer Center; Department of Medicine, Division of Infectious Diseases, Indiana University School of Medicine, Indianapolis, Indiana [193]

Kevin E. Brown, MD, MRCP, FRCPath
Virus Reference Department, National Infection Service, Public Health England, London, United Kingdom [192]

Robert H. Brown, Jr., MD, PhD
Chairman, Department of Neurology, University of Massachusetts Medical School, Worchester, Massachusetts [429, 441]

Amy E. Bryant, PhD
Research Career Scientist, Veterans Affairs Medical Center, Boise, Idaho; Affiliate Associate Professor, University of Washington School of Medicine, Seattle, Washington [149]

Fred Bunz, MD, PhD
Associate Professor, Johns Hopkins University School of Medicine, Baltimore, Maryland [67]

Christopher M. Burns, MD
Associate Professor of Medicine, Geisel School of Medicine at Dartmouth, Dartmouth-Hitchcock Medical Center, Lebanon, New Hampshire [410]

David M. Burns, MD
Professor Emeritus, Department of Family and Preventive Medicine, University of California, San Diego School of Medicine, San Diego, California [448]

John C. Byrd, MD
D. Warren Brown Chair of Leukemia Research; Distinguished University Professor of Medicine, Medicinal Chemistry, and Veterinary Biosciences; Director, Division of Hematology, Department of Medicine, The Ohio State University, Columbus, Ohio [103]

Katherine N. Cahill, MD
Assistant Professor of Medicine, Harvard Medical School; Division of Rheumatology, Immunology, and Allergy, Brigham and Women's Hospital, Boston, Massachusetts [345]

Rodrigo T. Calado, MD, PhD
Associate Professor of Medicine, Ribeirão Preto Medical School, University of São Paulo, Ribeirão Preto, Brazil [470]

Stephen B. Calderwood, MD
Morton N. Swartz, MD Academy Professor of Medicine (Microbiology and Immunobiology), Harvard Medical School; Chief, Division of Infectious Diseases, Massachusetts General Hospital, Boston, Massachusetts [128]

Michael Camilleri, MD
Atherton and Winifred W. Bean Professor; Professor of Medicine, Pharmacology, and Physiology, Mayo Clinic School of Medicine, Rochester, Minnesota [42]

Christopher P. Cannon, MD
Professor of Medicine, Harvard Medical School; Cardiovascular Division, Brigham and Women's Hospital; Baim Institute for Clinical Research, Boston, Massachusetts [268]

Brian C. Capell, MD, PhD
Instructor, Penn Epigenetics Institute and Department of Dermatology, University of Pennsylvania Perelman School of Medicine, Philadelphia, Pennsylvania [471]

Jonathan R. Carapetis, MBBS, PhD, FRACP, FAFPHM, FAHMS
Director, Telethon Kids Institute; Professor, The University of Western Australia; Consultant, Perth Children's Hospital, Perth, Western Australia [352]

Arturo Casadevall, MD, PhD
Professor and Chair, Department of Molecular Microbiology and Immunology, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland [210]

Jonathan Cedernaes, MD, PhD
Visiting Postdoctoral Fellow, Division of Endocrinology, Metabolism and Molecular Medicine, Department of Medicine, Feinberg School of Medicine, Northwestern University, Chicago, Illinois [475]

Bartolome R. Celli, MD
Professor of Medicine, Harvard Medical School; Staff Physician, Division of Pulmonary and Critical Care Medicine, Brigham and Women's Hospital, Boston, Massachusetts [295]

Murali Chakinala, MD
Associate Professor of Medicine, Division of Pulmonary and Critical Care Medicine, Washington University School of Medicine, St. Louis, Missouri [252]

Anil Chandraker, MBChB, FRCP
Associate Professor of Medicine, Harvard Medical School; Medical Director of Kidney and Pancreas Transplantation; Director, Schuster Family Transplantation Research Center, Brigham and Women's Hospital, Boston, Massachusetts [307]

François Chappuis, MD, PhD
Professor, Faculty of Medicine, University of Geneva; Head, Division of Tropical and Humanitarian Medicine, Geneva University Hospitals, Geneva, Switzerland [222]

Richelle C. Charles, MD
Assistant Professor of Medicine, Harvard Medical School; Assistant Physician, Division of Infectious Diseases, Massachusetts General Hospital, Boston, Massachusetts [128]

Rémi N. Charrel, MD, PhD
Professor of Medicine, Department of Virology; Deputy Director, Research Department, Unité des Virus Emergents, Aix-Marseille University, Marseille, France [204]

Lan X. Chen, MD, PhD
Penn Presbyterian Medical Center, Philadelphia, Pennsylvania [365]

Yuan-Tsong Chen, MD, PhD
Professor of Pediatrics, Duke University, Durham, North Carolina; Distinguished Research Fellow, Institute of Biomedical Sciences, Academia Sinica, Taipei, Taiwan [412]

Glenn M. Chertow, MD, MPH
Norman S. Coplon/Satellite Healthcare Professor of Medicine; Chief, Division of Nephrology, Stanford University School of Medicine, Palo Alto, California [306]

Augustine M. K. Choi, MD
Sanford I. Weill Chairman and Professor of Medicine, Joan and Sanford I. Weill Department of Medicine, Weill Cornell Medical College; Physician-in-Chief, New York-Presbyterian Hospital-Weill Cornell Medical Center, New York, New York [280]

Raymond T. Chung, MD
Director of Hepatology and Liver Center; Vice Chief, Gastroenterology Division, Kevin and Polly Maroni Research Scholar, Massachusetts General Hospital, Boston, Massachusetts [338]

Jeffrey W. Clark, MD
Associate Professor of Medicine, Harvard Medical School; Medical Director, Clinical Trials Core, Dana-Farber Harvard Cancer Center; Massachusetts General Hospital, Boston, Massachusetts [68]

Bruce H. Cohen, MD
Professor of Pediatrics, Northeast Ohio Medical University; Director; NeuroDevelopmental Science Center; Director; Division of Neurology, Children's Hospital Medical Center of Akron, Akron, Ohio [472]

Jeffrey I. Cohen, MD
Chief, Laboratory of Infectious Diseases, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, Maryland [189, 199]

Darwin L. Conwell, MD, MS
Professor of Medicine, The Ohio State University College of Medicine; Director, Division of Gastroenterology, Hepatology and Nutrition; The Ohio State University Wexner Medical Center, Columbus, Ohio [340, 341]

Kathleen E. Corey, MD, MPH
Assistant Professor of Medicine, Harvard Medical School; Director of the MGH Fatty Liver Clinic, Gastrointestinal Unit, Massachusetts General Hospital, Boston, Massachusetts [46]

Lawrence Corey, MD
Past President and Director, Fred Hutchinson Cancer Research Center; Member, Vaccine and Infectious Disease Division, Clinical Research Division, and Public Health Sciences Division, Fred Hutchinson Cancer Research Center; Professor, Departments of Medicine and Laboratory Medicine, University of Washington, Seattle, Washington [187]

Jorge Cortes, MD
Jane and John Justin Distinguished Chair in Leukemia Research; Deputy Chairman; Section Chief of AML and CML, The University of Texas MD Anderson Cancer Center, Houston, Texas [101]

Felicia Cosman, MD
Professor of Medicine, Columbia University, New York, New York; Helen Hayes Hospital, West Haverstraw, New York [404]

James D. Crapo, MD
Professor, Department of Medicine, Division of Pulmonary, Critical Care and Sleep Medicine, National Jewish Health, Denver, Colorado [286]

Mark A. Creager, MD
Professor of Medicine, Geisel School of Medicine at Dartmouth; Director, Heart and Vascular Center, Dartmouth-Hitchcock Medical Center, Lebanon, New Hampshire [274-276]

Bruce A. C. Cree, MD, PhD, MAS
Associate Professor of Clinical Neurology, Department of Neurology, UCSF Weill Institute for Neurosciences, University of California San Francisco, San Francisco, California [436, 437]

Leslie J. Crofford, MD
Professor, Departments of Medicine and Pathology, Microbiology and Immunology, Vanderbilt University; Chief, Division of Rheumatology and Immunology, Vanderbilt University Medical Center, Nashville, Tennessee [366]

Jennifer M. Croswell, MD, MPH
Senior Program Officer, Office of the Chief Science Officer, Patient-Centered Outcomes Research Institute (PCORI), Washington, DC [66]

James E. Crowe, Jr., MD
Director, Vanderbilt Vaccine Center, Vanderbilt University Medical Center, Nashville, Tennessee [194]

Philip E. Cryer, MD
Professor of Medicine Emeritus, Washington University in St. Louis; Physician, Barnes-Jewish Hospital, St. Louis, Missouri [399]

Gary C. Curhan, MD
Professor of Medicine, Harvard Medical School; Professor of Epidemiology, Harvard School of Public Health; Editor-in-Chief, Clinical Journal of the American Society of Nephrology; Channing Division of Network Medicine/Renal Division, Brigham and Women's Hospital, Boston, Massachusetts [312]

Brendan D. Curti, MD
Director, Genitourinary Oncology Research and Clinical Biotherapy Programs; Co-Director, Melanoma Program, Earle A. Chiles Research Institute, Providence Cancer Center, Portland, Oregon [72]

John J. Cush, MD
Professor of Medicine and Rheumatology; Director of Clinical Rheumatology, Baylor Research Institute, Baylor University Medical Center, Baylor Scott & White Health, Dallas, Texas [363]

Charles A. Czeisler, MD, PhD
Frank Baldino, Jr., PhD Professor of Sleep Medicine, Professor of Medicine and Director, Division of Sleep Medicine, Harvard Medical School; Chief, Division of Sleep and Circadian Disorders, Departments of Medicine and Neurology, Brigham and Women's Hospital, Boston, Massachusetts [27]

Josep Dalmau, MD, PhD
ICREA Professor, Institut d'Investigacions Biomèdiques August Pi i Sunyer, Hospital Clínic, University of Barcelona, Barcelona, Spain; Adjunct Professor, University of Pennsylvania, Philadelphia, Pennsylvania [90]

Daniel F. Danzl, MD
Professor and Chair, Department of Emergency Medicine, University of Louisville, Louisville, Kentucky [454, 455]

Robert B. Daroff, MD
Professor and Chair Emeritus, Department of Neurology, Case Western Reserve University School of Medicine; University Hospitals–Cleveland Medical Center, Cleveland, Ohio [19]

Charles E. Davis, MD
Professor of Pathology and Medicine, Emeritus, University of California, San Diego School of Medicine; Director Emeritus, Microbiology, University of California, San Diego Medical Center, San Diego, California [216, S14]

Stephen N. Davis, MBBS, FRCP
Theodore E. Woodward Professor and Chairman of the Department of Medicine; Vice President of Clinical Translational Science, University of Maryland Baltimore; Physician-in-Chief, University of Maryland Medical Center, Baltimore, Maryland [399]

Lisa M. DeAngelis, MD
Chair, Department of Neurology, Memorial Sloan Kettering Cancer Center; Professor of Neurology, Weill Cornell Medical College, New York, New York [86]

Rafael de Cabo, PhD
Chief, Translational Gerontology Branch, National Institute on Aging, National Institutes of Health, Baltimore, Maryland [463]

John Del Valle, MD
Professor and Senior Associate Chair of Medicine, Department of Internal Medicine, University of Michigan School of Medicine, Ann Arbor, Michigan [317]

Marie B. Demay, MD
Professor of Medicine, Harvard Medical School; Physician, Massachusetts General Hospital, Boston, Massachusetts [402]

David W. Denning, MBBS, FRCP, FRCPath, FMedSci
Professor of Infectious Diseases in Global Health; Director, National Aspergillosis Centre, The University of Manchester and Wythenshawe Hospital, Manchester, United Kingdom [212]

Robert J. Desnick, MD, PhD
Dean for Genetic and Genomic Medicine; Professor and Chair Emeritus, Department of Genetics and Genomic Sciences, Mount Sinai School of Medicine, New York, New York [409]

Betty Diamond, MD
The Feinstein Institute for Medical Research, Northwell Health System; Center for Autoimmunity and Musculoskeletal Diseases, Manhasset, New York [348]

Marcelo F. Di Carli, MD
Professor, Department of Radiology and Medicine, Harvard Medical School; Chief, Division of Nuclear Medicine and Molecular Imaging; Executive Director, Noninvasive Cardiovascular Imaging Program, Brigham and Women's Hospital, Boston, Massachusetts [236, A8]

Anna Mae Diehl, MD
Florence McAlister Professor of Medicine; Director, Duke Liver Center, Duke University, Durham, North Carolina [336]

Jules L. Dienstag, MD
Carl W. Walter Professor of Medicine, Harvard Medical School; Physician, Gastrointestinal Unit, Department of Medicine, Massachusetts General Hospital, Boston, Massachusetts [332-334, 338, A13]

William P. Dillon, MD
Professor and Executive Vice-Chair, Department of Radiology and Biomedical Imaging, University of California, San Francisco, San Francisco, California [416, A16]

Charles A. Dinarello, MD
Distinguished Professor of Medicine and Immunology, University of Colorado Denver, Aurora, Colorado; Professor of Experimental Medicine, Radboud University Medical Center, Nijmegen, The Netherlands [15]

Susan M. Domchek, MD
Basser Professor of Oncology, Abramson Cancer Center, Perelman School of Medicine University of Pennsylvania, Philadelphia, Pennsylvania [457]

Richard L. Doty, PhD
Professor, Department of Otorhinolaryngology: Head and Neck Surgery; Director, Smell and Taste Center, Perelman School of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania [29]

Vanja C. Douglas, MD
Associate Professor of Clinical Neurology and Sara and Evan Williams Foundation Endowed Neurohospitalist Chair, University of California, San Francisco, San Francisco, California [20]

David F. Driscoll, PhD
Associate Professor of Medicine, University of Massachusetts Medical School, Worchester, Massachusetts [328]

Thomas D. DuBose, Jr., MD, MACP
Professor Emeritus, Wake Forest University, Winston Salem, North Carolina [51, S1]

J. Stephen Dumler, MD
Professor and Chair, Department of Pathology, Uniformed Services University of the Health Sciences; Walter Reed National Military Medical Center; Joint Pathology Center, Bethesda, Maryland [182]

Andrea Dunaif, MD
Lillian and Henry M. Stratton Professor of Molecular Medicine; Chief, Hilda and J. Lester Gabrilove Division of Endocrinology, Diabetes and Bone Disease, Icahn School of Medicine at Mount Sinai, New York, New York [391]

Samuel C. Durso, MD, MBA
Mason F. Lord Professor of Medicine; Director, Division of Geriatric Medicine and Gerontology, Johns Hopkins University School of Medicine; Executive Vice Chair, Department of Medicine, Johns Hopkins Bayview Medical Center; Baltimore, Maryland [32, A2]

Janice P. Dutcher, MD
Associate Director, Cancer Research Foundation of New York, Chappaqua, New York; Former Professor of Medicine, New York Medical College, Valhalla, New York [71]

Johanna Dwyer, DSc, RD
Professor, Tufts University School of Medicine; Senior Scientist, Jean Mayer USDA Human Nutrition Research Center on Aging; Director, Frances Stern Nutrition Center, Tufts Medical Center, Boston, Massachusetts [325]

Jeffery S. Dzieczkowski, MD
Physician, Boise VA Medical Center, V-IMPACT Telehealth Program, Boise, Idaho [109]

Kim A. Eagle, MD
Albion Walter Hewlett Professor of Internal Medicine; Director, Frankel Cardiovascular Center, University of Michigan Health System, Ann Arbor, Michigan [467]

James A. Eastham, MD
Chief, Urology Service; Peter T. Scardino Chair in Oncology, Department of Surgery, Sidney Kimmel Center for Prostate and Urologic Cancers, Memorial Sloan Kettering Cancer Center, New York, New York [83]

Robert H. Eckel, MD
Professor of Medicine; Professor of Physiology and Biophysics, University of Colorado School of Medicine, Aurora, Colorado [401]

John E. Edwards, Jr., MD
Distinguished Professor of Medicine Emeritus, David Geffen School of Medicine at UCLA; Senior Investigator, LA Biomedical Research Institute at Harbor/UCLA, Torrance, California [206, 211]

David A. Ehrmann, MD
Professor of Medicine, Section of Endocrinology; Director, University of Chicago Center for PCOS, University of Chicago, Chicago, Illinois [387]

Ezekiel J. Emanuel, MD, PhD
Chair, Department of Medical Ethics and Health Policy, Levy University Professor, Perelman School of Medicine and Wharton School, University of Pennsylvania, Philadelphia, Pennsylvania [9]

Jack Ende, MD
The Schaeffer Professor of Medicine; Assistant Vice President, University of Pennsylvania Health System; Assistant Dean for Advanced Medical Practice, Perelman School of Medicine of the University of Pennsylvania, Philadelphia, Pennsylvania [465]

John W. Engstrom, MD
Betty Anker Fife Distinguished Professor and Vice-Chairman; Neurology Residency Program Director, University of California, San Francisco, San Francisco, California [14, 432]

Moshe Ephros, MD
Clinical Associate Professor, Faculty of Medicine, Technion-Israel Institute of Technology; Pediatric Infectious Disease Unit, Carmel Medical Center; Haifa, Israel [167]

Aaron Ermel, MD
Assistant Professor of Clinical Medicine, Department of Internal Medicine, Division of Infectious Diseases, Indiana University School of Medicine, Indianapolis, Indiana [193]

Tim Evans, DPhil, MD
Senior Director, Health, Nutrition and Population, The World Bank Group, Washington, DC [462]

Carmella Evans-Molina, MD, PhD
J.O. Ritchey Scholar in Medicine; Associate Professor, Departments of Medicine and Pediatrics; Director of Diabetes Research in the Herman B Wells Center for Pediatric Research; Associate Director in the IU Center for Diabetes and Metabolic Diseases, Indiana University School of Medicine; Staff Physician, Richard L. Roudebush VA Medical Center, Indianapolis, Indiana [396]

Christopher H. Fanta, MD
Professor of Medicine, Harvard Medical School; Director, Partners Asthma Center; Member, Pulmonary and Critical Care Medicine Division, Brigham and Women's Hospital, Boston, Massachusetts [34]

Paul Farmer, MD, PhD
Kolokotrones University Professor, Harvard University; Chair, Department of Global Health and Social Medicine, Harvard Medical School; Chief, Division of Global Health Equity, Brigham and Women's Hospital; Co-Founder, Partners In Health, Boston, Massachusetts [460]

Anthony S. Fauci, MD
Chief, Laboratory of Immunoregulation; Director, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, Maryland [1, 196, 197, 342, 356, A14, S2]

Murray J. Favus, MD
Professor of Medicine, Department of Medicine, Section of Endocrinology, Diabetes and Metabolism, Director Bone Program, University of Chicago Medicine, Chicago, Illinois [405]

David P. Faxon, MD
Senior Lecturer, Harvard Medical School; Associate Chief of Cardiology, Brigham and Women's Hospital; Boston, Massachusetts [237, 270, A11]

David T. Felson, MD, MPH
Professor of Medicine and Epidemiology; Chair, Clinical Epidemiology Unit, Boston University School of Medicine, Boston, Massachusetts [364]

Howard L. Fields, MD, PhD
Professor, Department of Neurology, University of California, San Francisco, San Francisco, California [10]

Gregory A. Filice, MD
Professor of Medicine, Medical School, and Adjunct Professor of Epidemiology and Community Health, School of Public Health, University of Minnesota; Chief, Infectious Disease Section, Veterans Affairs Healthcare System, Minneapolis, Minnesota [169]

Robert W. Finberg, MD
Chair, Department of Medicine, University of Massachusetts Medical School, Worcester, Massachusetts [70, 138]

Joyce D. Fingeroth, MD
Professor of Medicine, Division of Infectious Disease, University of Massachusetts Medical School, Worcester, Massachusetts [138]

Alain Fischer, MD, PhD
Director of Imagine Institute; Professor at College de France, Paris, France [344, S7]

Jeffrey S. Flier, MD
Higginson Professor of Physiology and Medicine; Harvard University Distinguished Service Professor, Harvard Medical School, Boston, Massachusetts [394]

Agnes B. Fogo, MD
Jon L. Shapiro Endowed Chair in Pathology; Professor of Pathology, Medicine and Pediatrics; Director, Renal Pathology/Electron Microscopy Laboratory, Vanderbilt University Medical Center, Nashville, Tennessee [A3]

Gregory K. Folkers, MS, MPH
Chief of Staff, Office of the Director, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, Maryland [197]

Larry C. Ford, MD
Clinical Infectious Diseases, Intermountain Healthcare, Provo, Utah [31]

Jane E. Freedman, MD
Professor of Medicine, University of Massachusetts Medical School, Worcester, Massachusetts [113]

Roy Freeman, MD
Professor of Neurology, Harvard Medical School; Director, Center for Autonomic and Peripheral Nerve Disorders, Beth Israel Deaconess Medical Center, Boston, Massachusetts [18]

Carl E. Freter, MD, PhD, FACP
Professor of Medicine; Director, Division of Hematology and Oncology; Associate Director, Cancer Center, Saint Louis University, St. Louis, Missouri [91]

Lawrence S. Friedman, MD
Professor of Medicine, Harvard Medical School; Professor of Medicine, Tufts University School of Medicine; Assistant Chief of Medicine, Massachusetts General Hospital, Boston, Massachusetts; Anton R. Fried, MD Chair, Department of Medicine, Newton-Wellesley Hospital, Newton, Massachusetts [46]

Sonia Friedman, MD
Associate Professor of Medicine, Harvard Medical School; Associate Physician, Brigham and Women's Hospital, Boston, Massachusetts [319]

Anne L. Fuhlbrigge, MD, MS
Senior Associate Dean for Clinical Affairs, University of Colorado School of Medicine; Chief Medical Officer, CU Medicine, Aurora, Colorado [280]

Andre D. Furtado, MD
Assistant Professor, Department of Radiology, School of Medicine, University of Pittsburgh, Pittsburgh, Pennsylvania [A16]

Nicholas B. Galifianakis, MD, MPH
Associate Professor of Neurology, Movement Disorders and Neuromodulation Center, Department of Neurology, University of California, San Francisco, San Francisco, California [V1]

John I. Gallin, MD
Associate Director for Clinical Research; Chief Scientific Officer, Clinical Center, National Institutes of Health, Bethesda, Maryland [60]

Karunesh Ganguly, MD, PhD
Associate Professor; Director of NeuroRehabilitation Research, Department of Neurology, University of California, San Francisco; Neurology and Rehabilitation Service, San Francisco VA Medical Center, San Francisco, California [477]

Charlotte A. Gaydos, DrPh, MS, MPH
Professor of Medicine, Johns Hopkins University, Division of Infectious Diseases, Baltimore, Maryland [184]

J. Michael Gaziano, MD, MPH
Professor of Medicine, Harvard Medical School; Chief, Division of Aging, Brigham and Women's Hospital; Director, Massachusetts Veterans Epidemiology Center, Boston VA Healthcare System, Boston, Massachusetts [233]

Thomas A. Gaziano, MD, MSc
Assistant Professor of Medicine, Harvard Medical School; Assistant Professor, Health Policy and Management, Center for Health Decision Sciences, Harvard School of Public Health; Director, Strategic Planning and Global Cardiovascular Health Policy and Prevention Unit, Cardiovascular Medicine, Department of Medicine, Brigham and Women's Hospital, Boston, Massachusetts [233]

Susan L. Gearhart, MD
Associate Professor, Surgery, Johns Hopkins Medical Institutions, Baltimore, Maryland [321]

Robert H. Gelber, MD
Clinical Professor of Medicine and Dermatology, University of California, San Francisco, San Francisco, California [174]

Jeffrey M. Gelfand, MD, MAS, FAAN
Assistant Professor of Clinical Neurology, Department of Neurology, University of California, San Francisco, San Francisco, California [20]

Alfred L. George, Jr., MD
Magerstadt Professor and Chair, Department of Pharmacology, Feinberg School of Medicine, Northwestern University, Chicago, Illinois [303]

Dale N. Gerding, MD
Professor of Medicine (retired), Department of Medicine, Loyola University Chicago Stritch School of Medicine, Maywood, Illinois; Research Physician, Edward Hines Jr. Veterans Affairs Hospital, Hines, Illinois [129]

Michael D. Geschwind, MD, PhD
Professor of Neurology; Michael J. Homer Chair in Neurology, Memory and Aging Center, University of California, San Francisco, San Francisco, California [V1]

Marc G. Ghany, MD, MHSc
Investigator, Liver Diseases Branch, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, Bethesda, Maryland [329]

Christopher H. Gibbons, MD, MMSc
Associate Professor of Neurology, Harvard Medical School; Beth Israel Deaconess Medical Center, Boston, Massachusetts [432]

Michael Giladi, MD, MSc
Associate Professor of Medicine, Sackler Faculty of Medicine, Tel Aviv University; The Infectious Disease Unit and the Bernard Pridan Laboratory for Molecular Biology of Infectious Diseases, Tel Aviv Sourasky Medical Center, Tel Aviv, Israel [167]

Robert P. Giugliano, MD, SM
Associate Professor of Medicine, Harvard Medical School; Cardiovascular Medicine, TIMI Study Office, Brigham and Women's Hospital, Boston, Massachusetts [268]

Roger I. Glass, MD, PhD
Director, Fogarty International Center, Bethesda, Maryland [198]

Eli Glatstein, MD
Professor Emeritus, Department of Radiation Oncology, Hospital of the University of Pennsylvania, Philadelphia, Pennsylvania [S4]

Ronald S. Go, MD
Chair, Core/Consultative Hematology, Division of Hematology, Mayo Clinic Rochester, Rochester, Minnesota [311]

Peter J. Goadsby, MD, PhD, DSc, FRACP, FRCP, FMedSci
Professor, NIHR-Wellcome Trust King's Clinical Research Facility, King's College London, United Kingdom; Professor, Department of Neurology, University of California, San Francisco, San Francisco, California [13, 422]

Ary L. Goldberger, MD
Professor of Medicine, Harvard Medical School; Wyss Institute for Biologically Inspired Engineering, Harvard University; Director, Margret and H. A. Rey Institute for Nonlinear Dynamics in Medicine; Director, NIH-sponsored Research Resource for Complex Physiologic Signals; Associate Chief, Division of Interdisciplinary Medicine and Biotechnology, Beth Israel Deaconess Medical Center, Boston, Massachusetts [235, A7, A9]

David Goldblatt, MB, ChB, PhD
Professor of Vaccinology and Immunology; Consultant in Paediatric Immunology; Director of Clinical Research and Development; Director, NIHR Biomedical Research Centre, Great Ormond Street Institute of Child Health; University College London; Great Ormond Street Hospital for Children NHS Trust, London, United Kingdom [141]

Samuel Z. Goldhaber, MD
Professor of Medicine, Harvard Medical School; Director, Thrombosis Research Group; Head, Vascular Medicine Section, Cardiovascular Division, Brigham and Women's Hospital, Boston, Massachusetts [273]

Ralph Gonzales, MD, MSPH
Professor of Medicine; Associate Dean, Clinical Innovation, University of California, San Francisco, San Francisco, California [31]

Marga G. A. Goris, PhD
Head OIE and National Leptospirosis Reference Centre, Department of Medical Microbiology, AMC (Academic Medical Centre), Amsterdam, The Netherlands [179]

Maria Luisa Gorno-Tempini, MD, PhD
Professor, Department of Neurology; Language Neurobiology Lab, Memory and Aging Center; Dyslexia Center, University of California, San Francisco, San Francisco, California [V2]

Peter A. Gottlieb, MD
Professor of Pediatrics and Medicine, Barbara Davis Center for Childhood Diabetes, University of Colorado School of Medicine, Aurora, Colorado [382]

Gregory A. Grabowski, MD
Professor Emeritus, Department of Pediatrics, University of Cincinnati College of Medicine; Division of Human Genetics, Cincinnati Children's Hospital Medical Center; Chief Scientific Officer, Kiniksa Pharmaceuticals, Ltd., Wellesley, Massachusetts [411]

Yonatan H. Grad, MD, PhD
Assistant Professor of Immunology and Infectious Diseases, Harvard T.H. Chan School of Public Health; Associate Physician, Division of Infectious Diseases, Brigham and Women's Hospital, Harvard Medical School, Boston, Massachusetts [474]

Christine Grady, RN, PhD
Chief, Department of Bioethics, National Institutes of Health Clinical Center, Bethesda, Maryland [8]

Alexander R. Green, MD, MPH
Associate Professor of Medicine, Harvard Medical School; Senior Scientist, Division of General Internal Medicine, Massachusetts General Hospital, Boston, Massachusetts [7]

Steven A. Greenberg, MD
Professor of Neurology, Harvard Medical School; Associate Neurologist, Brigham and Women's Hospital, Boston, Massachusetts [358]

Norton J. Greenberger, MD
Clinical Professor of Medicine, Harvard Medical School; Senior Physician, Division of Gastroenterology, Brigham and Women's Hospital, Boston, Massachusetts [339-341]

Daryl R. Gress, MD, FAAN, FCCM, FNCS
Professor of Neurology, University of Nebraska, Omaha, Nebraska [301, 302]

Rasim Gucalp, MD, FACP
Professor of Medicine, Albert Einstein College of Medicine; Associate Chairman for Educational Programs, Department of Oncology; Director, Hematology/Oncology Fellowship, Montefiore Medical Center, Bronx, New York [71]

Kalpana Gupta, MD, MPH
Professor, Department of Medicine, Boston University School of Medicine; Chief, Section of Infectious Diseases, VA Boston Healthcare System, Boston, Massachusetts [130]

Chadi A. Hage, MD, FCCP
Associate Professor of Clinical Medicine, Thoracic Transplant Program, Indiana University Health, Indianapolis, Indiana [207]

Bevra Hannahs Hahn, MD
Distinguished Professor of Medicine (Emeritus), University of California, Los Angeles, Los Angeles, California [349]

Noah M. Hahn, MD
Associate Professor of Oncology and Urology, Sidney Kimmel Comprehensive Cancer Center, Johns Hopkins University School of Medicine, Baltimore, Maryland [82]

Colin N. Haile, MD, PhD
Assistant Professor, Menninger Department of Psychiatry and Behavioral Sciences, Baylor College of Medicine; Michael E. DeBakey VA Medical Center, Houston, Texas [446]

Janet E. Hall, MD
Clinical Director and Senior Investigator, Division of Intramural Research, NIH/NIEHS, Research Triangle Park, North Carolina [385, 386, 389]

Jesse B. Hall, MD, FCCP
Professor of Medicine, Anesthesia and Critical Care; Chief, Section of Pulmonary and Critical Care Medicine, University of Chicago, Chicago, Illinois [293]

Scott A. Halperin, MD
Professor of Pediatrics and Microbiology and Immunology; Head, Pediatric Infectious Diseases; Director, Canadian Center for Vaccinology, Dalhousie University, Halifax, Nova Scotia, Canada [155]

R. Doug Hardy, MD
Infectious Diseases Specialists, PA; Medical City Dallas Hospital and Medical City Children's Hospital, Dallas; Baylor Regional Medical Center, Plano, Texas [183]

William L. Hasler, MD
Professor, Division of Gastroenterology, University of Michigan Health System, Ann Arbor, Michigan [41, 314]

Stephen L. Hauser, MD
Robert A. Fishman Distinguished Professor, Department of Neurology; Director, UCSF Weill Institute for Neurosciences, University of California, San Francisco, San Francisco, California [1, 300, 415, 417, 433-437, 439, S9]

Daniel F. Hayes, MD, FACP, FASCO
Stuart B Padnos Professor of Breast Cancer Research; Clinical Director of Breast Cancer, University of Michigan Health System and Comprehensive Cancer Center, Ann Arbor, Michigan [75]

Barton F. Haynes, MD
Frederic M. Hanes Professor of Medicine and Immunology, Departments of Medicine and Immunology; Director, Duke Human Vaccine Institute, Duke University School of Medicine, Durham, North Carolina [342]

J. Claude Hemphill, III, MD, MAS
Professor of Neurology and Neurological Surgery, University of California, San Francisco; Chief of Neurology, Zuckerberg San Francisco General Hospital, San Francisco, California [301, 302, 419-421]

Katherine A. High, MD
Professor Emerita, Perelman School of Medicine at the University of Pennsylvania; President and Chief Scientific Officer, Spark Therapeutics, Philadelphia, Pennsylvania [112, 458]

Christine E. Hill-Kayser, MD
Assistant Professor of Radiation Oncology, Perelman School of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania [S4]

Ikuo Hirano, MD
Professor of Medicine, Division of Gastroenterology, Northwestern University Feinberg School of Medicine, Chicago, Illinois [40, 316]

Martin S. Hirsch, MD
Professor of Medicine, Harvard Medical School; Professor of Immunology and Infectious Diseases, Harvard School of Public Health; Physician, Massachusetts General Hospital, Boston, Massachusetts [190]

Dieter Hoelzer, PhD, MD
Emeritus Director of Internal Medicine, University of Frankfurt, Frankfurt, Germany [102]

A. Victor Hoffbrand, DM
Emeritus Professor of Haematology, University College, London, London, United Kingdom [95]

L. John Hoffer, MD, PhD
Professor, Faculty of Medicine, McGill University; Senior Physician, Divisions of Internal Medicine and Endocrinology, Lady Davis Institute for Medical Research, Jewish General Hospital, Montreal, Quebec, Canada [328]

Charles W. Hoge, MD
Senior Scientist, Center for Psychiatry and Neuroscience, Walter Reed Army Institute of Research, Silver Spring, Maryland [S6]

Elizabeth L. Hohmann, MD
Associate Professor of Medicine and Infectious Diseases, Harvard Medical School; Massachusetts General Hospital, Boston, Massachusetts [146]

Steven M. Holland, MD
Director, Division of Intramural Research, National Institute of Allergy and Infectious Diseases, National Institutes of Health; Chief, Immunopathogenesis Section, Laboratory of Clinical Infectious Diseases, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, Maryland [60, 175]

King K. Holmes, MD, PhD
Director of Research and Faculty Development, Department of Global Health; Professor of Medicine and Global Health; Adjunct Professor of Microbiology and Epidemiology; Director, UW Center for AIDS and STD; Co-Director, UW/Fred Hutch Center for AIDS Research (CFAR); Co-PI, UW/UCSF International Training and Education Center for Health (I-TECH); University of Washington, Seattle, Washington [131]

David Hong, MD
Instructor of Medicine, Harvard Medical School; Division of Allergy & Immunology, Brigham and Women's Hospital, Boston, Massachusetts [346]

Jay H. Hoofnagle, MD
Director, Liver Diseases Research Branch, National Institute of Diabetes and Digestive and Kidney Diseases, National Institutes of Health, Bethesda, Maryland [329]

David C. Hooper, MD
Professor, Harvard Medical School; Chief, Infection Control Unit; Associate Chief, Division of Infectious Diseases, Massachusetts General Hospital, Boston, Massachusetts [139, 140]

Robert J. Hopkin, MD
Associate Professor, Department of Pediatrics, University of Cincinnati College of Medicine; Division of Human Genetics, Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio [411]

Leora Horn, MD, MSc
Associate Professor, Division of Hematology and Medical Oncology, Vanderbilt University School of Medicine, Nashville, Tennessee [74]

Kirsten B. Hornbeak, MD
Resident, Department of Emergency Medicine, Stanford Kaiser Emergency Medicine Residency, Stanford, California [451]

Jonathan C. Horton, MD, PhD
William F. Hoyt Professor of Neuro-ophthalmology, Professor of Ophthalmology, Neurology and Physiology, University of California, San Francisco School of Medicine, San Francisco, California [28, V3]

Howard Hu, MD, MPH, ScD
Dean; Professor of Environmental Health, Epidemiology and Global Health, Dalla Lana School of Public Health; Professor of Medicine, University of Toronto, Toronto, Ontario, Canada [449]

Deborah T. Hung, MD, PhD
Associate Professor of Genetics and Associate Professor of Medicine, Harvard Medical School; Brigham and Women's Hospital; Massachusetts General Hospital, Boston, Massachusetts; Co-Director, Infectious Disease & Microbiome Program, Broad Institute of MIT and Harvard, Cambridge, Massachusetts [474]

Gary M. Hunninghake, MD, MPH
Assistant Professor of Medicine, Harvard Medical School; Department of Medicine, Division of Pulmonary and Critical Care Medicine, Brigham and Women's Hospital, Boston, Massachusetts [287]

Stephen C. Hunt, MD, MPH
National Director, VA Post-Deployment Integrated Care Initiative; Clinical Associate Professor of Medicine, Department of Medicine, Division of General Internal Medicine, Occupational and Environmental Medicine Program, University of Washington, Seattle, Washington [S6]

Ashraf S. Ibrahim, PhD
Professor, Department of Medicine, Geffen School of Medicine, University of California, Los Angeles (UCLA); Division of Infectious Diseases, Los Angeles Biomedical Research Institute at Harbor–UCLA Medical Center, Torrance, California [213]

David H. Ingbar, MD
Professor, Medicine, Pediatrics and Integrative Biology and Physiology; Director, Pulmonary, Allergy, Critical Care and Sleep Division; CTSI Associate Director, Education, Career Development and Training; Executive Director, Center for Lung Science and Health, University of Minnesota School of Medicine, Minneapolis, Minnesota [298]

Alan C. Jackson, MD, FRCPC
Professor of Medicine (Neurology) and of Medical Microbiology, University of Manitoba; Section Head of Neurology, Winnipeg Regional Health Authority, Winnipeg, Manitoba, Canada [203]

Lisa A. Jackson, MD, MPH
Kaiser Permanente Washington Health Research Institute, Seattle, Washington [118]

Yves Jackson, MD, MPH, PhD
Senior Physician, Geneva University Hospital; Investigator, Institute of Global Health, University of Geneva, Switzerland [222]

Danny O. Jacobs, MD, MPH, FACS
Executive Vice President, Provost, and Dean of the School of Medicine; Thomas N. and Gleaves T. James Distinguished Chair, The University of Texas Medical Branch at Galveston, Galveston, Texas [12, 323, 324]

Caron A. Jacobson, MD
Instructor in Medicine, Harvard Medical School, Dana-Farber Cancer Institute, Boston, Massachusetts [104, 105]

J. Larry Jameson, MD, PhD
Robert G. Dunlop Professor of Medicine; Dean, Raymond and Ruth Perelman School of Medicine; Executive Vice President, University of Pennsylvania for the Health System, Philadelphia, Pennsylvania [1, 43, 89, 369-373, 375-378, 383, 384, 456, 457, A15]

Gordon L. Jensen, MD, PhD
Senior Associate Dean for Research; Professor of Medicine and Nutrition, University of Vermont College of Medicine, Burlington, Vermont [327]

Robert T. Jensen, MD
Chief, Cell Biology Section, National Institutes of Diabetes, Digestive and Kidney Diseases, National Institutes of Health, Bethesda, Maryland [80]

Roy M. John, MBBS, PhD, FRCP
Associate Professor of Medicine; Director, Center for Advanced Management of Ventricular Arrhythmias, Vanderbilt Heart and Vascular Institute, Nashville, Tennessee [247-251]

Savio John, MD
Director of Hepatology, State University of New York Upstate Medical University, Syracuse, New York [45]

James R. Johnson, MD
Professor of Medicine, University of Minnesota; Veterans Affairs Medical Center, Minneapolis, Minnesota [156]

Stuart Johnson, MD
Professor of Medicine, Loyola University Chicago Stritch School of Medicine; Staff Physician, Edward Hines Jr. VA Hospital, Hines, Illinois [129]

S. Claiborne Johnston, MD, PhD
Dean, Dell Medical School; Frank Denius Distinguished Dean's Chair in Medical Leadership; Vice President for Medical Affairs, University of Texas, Austin, Austin, Texas [419-421]

S. Andrew Josephson, MD
Professor and Chairman, Department of Neurology, University of California, San Francisco, San Francisco, California [24, 300, 301, V4]

Sandeep S. Jubbal, MD
Assistant Professor of Medicine, Department of Medicine, University of Massachusetts Medical School, Worcester, Massachusetts [136]

Harald W. Jüppner, MD
Professor of Pediatrics, Endocrine Unit and Pediatric Nephrology Unit, Harvard Medical School; Massachusetts General Hospital, Boston, Massachusetts [403]

Peter J. Kahrilas, MD
Gilbert H. Marquardt Professor of Medicine, Feinberg School of Medicine, Northwestern University, Chicago, Illinois [40, 316]

Gail Kang, MD
Private Practice, Berkeley, California [V1]

Hagop Kantarjian, MD
Chairman, Leukemia Department; Professor of Leukemia, The University of Texas MD Anderson Cancer Center, Houston, Texas [101]

Adolf W. Karchmer, MD
Professor of Medicine, Harvard Medical School; Former Chief, Division of Infectious Diseases, Beth Israel Deaconess Medical Center, Boston, Massachusetts [123]

Dennis L. Kasper, MD
William Ellery Channing Professor of Medicine and Professor of Microbiology and Immunobiology, Division of Immunology, Department of Microbiology and Immunobiology, Harvard Medical School, Boston, Massachusetts [1, 115, 117, 127, 153, 172, 459]

Daniel L. Kastner, MD, PhD
Scientific Director, National Human Genome Research Institute, National Institutes of Health, Bethesda, Maryland [362]

Sekar Kathiresan, MD
Associate Professor of Medicine, Harvard Medical School; Director, Center for Genomic Medicine, Massachusetts General Hospital; Director, Cardiovascular Disease Initiative, Broad Institute, Boston, Massachusetts [400]

Carol A. Kauffman, MD
Professor of Internal Medicine, University of Michigan Medical School; Chief, Infectious Diseases Section, Veterans Affairs Ann Arbor Healthcare System, Ann Arbor, Michigan [214]

Elaine T. Kaye, MD
Assistant Professor of Dermatology, Harvard Medical School; Boston Children's Hospital, Boston, Massachusetts [16, A1]

Kenneth M. Kaye, MD
Associate Professor of Medicine, Harvard Medical School; Division of Infectious Diseases, Brigham and Women's Hospital, Boston, Massachusetts [16, A1]

John A. Kessler, MD
Davee Professor of Stem Cell Biology, Davee Department of Neurology; Director, Northwestern University Stem Cell Institute, Feinberg School of Medicine, Northwestern University, Chicago, Illinois [473]

Jay S. Keystone, CM, MD, FRCPC, MSc(CTM)
Professor of Medicine, University of Toronto, Toronto, Ontario, Canada [119]

Sundeep Khosla, MD
Dr. Francis Chucker and Nathan Landow Research Professor; Mayo Foundation Distinguished Investigator; Director, Mayo Clinic Center for Clinical and Translational Science; Dean for Clinical and Translational Science, Mayo Clinic College of Medicine, Rochester, Minnesota [50]

Elliott Kieff, MD, PhD
Harriet Ryan Albee Professor of Medicine, Harvard Medical School; Brigham and Women's Hospital, Boston, Massachusetts [185]

Anthony A. Killeen, MD, PhD
Professor, Department of Laboratory Medicine and Pathology, University of Minnesota, Minneapolis, Minnesota [S12]

Kami Kim, MD
Professor, Division of Infectious Diseases and International Medicine, Department of Internal Medicine, Morsani College of Medicine, University of South Florida, Tampa, Florida [223]

S. Travis King, PharmD, BCPS (AQ ID)
Clinical Pharmacy Specialist—Infectious Diseases, Ochsner Medical Center, New Orleans, Louisiana [209]

Beth D. Kirkpatrick, MD
Professor of Medicine, Division of Infectious Diseases, Department of Medicine, University of Vermont Larner College of Medicine, Burlington, Vermont [162]

Priya S. Kishnani, MD
C. L. and Su Chen Professor of Pediatrics; Medical Director, YT and Alice Chen Pediatrics Genetics and Genomics Center; Division Chief, Medical Genetics, Duke University Medical Center, Durham, North Carolina [412]

Christine Klein, MD
Professor of Neurology and Neurogenetics, Institute of Neurogenetics and Department of Neurology, University of Lübeck and University Hospital Schleswig-Holstein, Lübeck, Germany [427, 428]

Barbara A. Konkle, MD
Professor of Medicine, Hematology, University of Washington; Associate Chief Scientific Officer, Bloodworks Northwest, Seattle, Washington [61, 111]

Peter Kopp, MD
Professor of Medicine, Division of Endocrinology, Metabolism and Molecular Science and Center for Genetic Medicine, Northwestern University Feinberg School of Medicine, Chicago, Illinois [456]

Walter J. Koroshetz, MD
National Institute of Neurological Disorders and Stroke, National Institutes of Health, Bethesda, Maryland [134]

Thomas R. Kosten, MD
J. H. Waggoner Professor of Psychiatry, Pharmacology, Immunology, Neuroscience, Baylor College of Medicine, Houston, Texas [446]

Theodore A. Kotchen, MD
Professor Emeritus and Associate Dean for Clinical Research, Department of Medicine, Medical College of Wisconsin, Milwaukee, Wisconsin [271]

Camille Nelson Kotton, MD, FIDSA, FAST
Clinical Director, Transplant and Immunocompromised Host Infectious Diseases, Infectious Diseases Division, Massachusetts General Hospital; Harvard Medical School, Boston, Massachusetts [190]

Phyllis E. Kozarsky, MD
Professor of Medicine and Infectious Diseases, Emory University School of Medicine, Atlanta, Georgia [119]

Barnett S. Kramer, MD, MPH, FACP
Director, Division of Cancer Prevention, National Cancer Institute, Bethesda, Maryland [66]

Joel Kramer, PsyD
Professor of Neuropsychology in Neurology; Director of Neuropsychology, Memory and Aging Center, University of California, San Francisco, San Francisco, California [425, V2]

Peter J. Krause, MD
Senior Research Scientist, Yale School of Public Health; Yale School of Medicine, New Haven, Connecticut [220]

John P. Kress, MD
Professor of Medicine, Director, Medical Intensive Care Unit, University of Chicago, Chicago, Illinois [293]

Arnold R. Kriegstein, MD, PhD
Professor of Neurology; Director, Eli and Edythe Broad Center of Regeneration Medicine and Stem Cell Research, University of California, San Francisco, San Francisco, California [417]

Patricia A. Kritek, MD, EdM
Associate Professor, Division of Pulmonary and Critical Care Medicine, University of Washington, Seattle, Washington [35, 278, A12]

Henry M. Kronenberg, MD
Professor of Medicine, Harvard Medical School; Chief, Endocrine Division, Massachusetts General Hospital, Boston, Massachusetts [402]

Jens H. Kuhn, MD, PhD, MS
Research Leader, Battelle Memorial Institute and Lead Virologist, NIH/NIAID/DCR/Integrated Research Facility at Fort Detrick (IRF-Frederick), Fort Detrick, Frederick, Maryland [204, 205]

Robert F. Kushner, MD
Professor of Medicine, Feinberg School of Medicine, Northwestern University, Chicago, Illinois [395]

Raymond Y. Kwong, MD, MPH
Associate Professor of Medicine, Harvard Medical School; Director of Cardiac Magnetic Resonance Imaging, Cardiovascular Division, Department of Medicine, Brigham and Women's Hospital, Boston, Massachusetts [236, A8]

Loren Laine, MD
Professor of Medicine, Yale School of Medicine, New Haven, Connecticut; VA Connecticut Healthcare System, West Haven, Connecticut [44]

Neal K. Lakdawala, MD
Instructor in Medicine, Harvard Medical School; Associate Physician, Cardiovascular Medicine, Brigham and Women's Hospital; Boston VA Healthcare; Boston, Massachusetts [254]

Anil K. Lalwani, MD
Professor and Vice Chair for Research; Director, Division of Otology, Neurotology and Skull Base Surgery; Director, Columbia Cochlear Implant Center, Columbia University College of Physicians and Surgeons; Medical Director of Perioperative Services, New York Presbyterian–Columbia University Irving Medical Center, New York, New York [30]

Michael J. Landzberg, MD
Associate Professor of Medicine, Harvard Medical School; Director, Boston Adult Congenital Heart Disease and Pulmonary Hypertension Program, Boston Children's Hospital, Brigham and Women's Hospital, Boston, Massachusetts [264]

H. Clifford Lane, MD
Clinical Director, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, Maryland [197, S2]

Carol A. Langford, MD, MHS
Harold C. Schott Endowed Chair; Director, Center for Vasculitis Care and Research, Department of Rheumatic and Immunologic Diseases, Cleveland Clinic, Cleveland, Ohio [356, 359, 367, 368, A14]

Regina C. LaRocque, MD, MPH
Assistant Professor of Medicine, Harvard Medical School; Assistant Physician, Massachusetts General Hospital, Boston, Massachusetts [128]

Leslie P. Lawley, MD
Assistant Professor, Department of Dermatology, School of Medicine, Emory University, Atlanta, Georgia [53]

Thomas J. Lawley, MD
William Patterson Timmie Professor of Dermatology, Former Dean, Emory University School of Medicine, Atlanta, Georgia [52, 53, 55, A4]

Sancy Leachman, MD, PhD
Professor and Chair, Department of Dermatology; Director, Melanoma Research Program, Knight Cancer Institute, Oregon Health & Science University, Portland, Oregon [72]

David G. Le Couteur, MD, PhD
Professor of Geriatric Medicine and Director of the Ageing and Alzheimer's Institute, University of Sydney and Concord Hospital, Sydney, Australia [463]

William M. Lee, MD
Professor of Internal Medicine; Meredith Mosle Chair in Liver Diseases, University of Texas Southwestern Medical Center at Dallas, Dallas, Texas [333]

Charles Lei, MD
Assistant Professor, Department of Emergency Medicine, Vanderbilt University Medical Center, Nashville, Tennessee [451]

Jane A. Leopold, MD
Associate Professor of Medicine, Harvard Medical School; Director, Women's Interventional Cardiology Health Initiative, Brigham and Women's Hospital, Boston, Massachusetts [237, A11]

Nelson Leung, MD
Professor of Medicine, Division of Nephrology and Hypertension, Division of Hematology, Mayo Clinic Rochester, Rochester, Minnesota [311]

Bruce D. Levy, MD
Professor of Medicine, Harvard Medical School; Pulmonary and Critical Care Medicine, Brigham and Women's Hospital, Boston, Massachusetts [278, 294]

Julia B. Lewis, MD
Professor, Department of Medicine, Division of Nephrology, Vanderbilt University Medical Center, Nashville, Tennessee [308]

Peter Libby, MD
Mallinckrodt Professor of Medicine, Harvard Medical School; Cardiovascular Specialist, Brigham and Women's Hospital, Boston, Massachusetts [232, A10]

Richard W. Light, MD
Professor of Medicine, Division of Allergy, Pulmonary, and Critical Care Medicine, Vanderbilt University, Nashville, Tennessee [288, 289]

Yusen E. Lin, PhD, MBA
Professor and Director, Center for Environmental Laboratory Services; National Kaohsiung Normal University, Kaohsiung, Taiwan [154]

Robert Lindsay, MD, PhD
Professor of Medicine, College of Physicians and Surgeons, Columbia University, New York, New York; Chief, Internal Medicine; Helen Hayes Hospital, West Haverstraw, New York [404]

Marc E. Lippman, MD, MACP, FRCP
Leonard M. Miller Professor of Internal Medicine, Psychiatry and Behavioral Sciences; Deputy Director, Sylvester Comprehensive Cancer Center, University of Miami Miller School of Medicine, Miami, Florida [75]

Peter E. Lipsky, MD
Charlottesville, Virginia [348]

Kathleen D. Liu, MD, PhD, MAS
Professor, Division of Nephrology, Department of Medicine, Division of Critical Care Medicine, Department of Anesthesiology, University of California, San Francisco, San Francisco, California [306]

Josep M. Llovet, MD, PhD
Liver Cancer Program, Division of Liver Diseases, Tisch Cancer Institute, Department of Medicine, Icahn School of Medicine at Mount Sinai, New York, New York; Liver Cancer Translational Research Laboratory, Barcelona Clínic Liver Cancer Group (BCLC), Liver Unit, IDIBAPS-Hospital Clínic, CIBERehd, University of Barcelona, Catalonia, Spain; Institució Catalana de Recerca i Estudis Avançats (ICREA), Barcelona, Catalonia, Spain [78]

Donald M. Lloyd-Jones, MD, ScM
Senior Associate Dean for Clinical and Translational Research; Chair, Department of Preventive Medicine; Director, Northwestern University Clinical and Translational Sciences Institute (NUCATS), Northwestern University, Feinberg School of Medicine, Chicago, Illinois [2]

Bernard Lo, MD
President, The Greenwall Foundation, New York; Professor of Medicine Emeritus and Director Emeritus of the Program in Medical Ethics, University of California, San Francisco, San Francisco, California [8]

Satinderjit Locham, MD
Postdoctoral Research Fellow, Department of Surgery, Johns Hopkins University School of Medicine, Baltimore, Maryland [322]

George Loewenstein, PhD
Herb Simon Professor of Economics and Psychology, Carnegie Mellon University, Pittsburgh Pennsylvania [468]

Dan L. Longo, MD, MACP
Professor of Medicine, Harvard Medical School; Senior Physician, Brigham and Women's Hospital; Deputy Editor, *New England Journal of Medicine*, Boston, Massachusetts [1, 58, 59, 62, 65, 68, 69, 89, 91, 92, 97, 104-107, 196, A5]

Nicola Longo, MD, PhD
Professor and Chief, Division of Medical Genetics, Departments of Pediatrics and Pathology; Medical Co-Director, Biochemical Genetics Laboratory, ARUP Laboratories, University of Utah, Salt Lake City, Utah [413, 414]

Joseph Loscalzo, MD, PhD
Hersey Professor of the Theory and Practice of Medicine, Harvard Medical School; Chairman, Department of Medicine; Physician-in-Chief, Brigham and Women's Hospital, Boston, Massachusetts [1, 36-39, 113, 231, 232, 234, 254, 256-263, 267, 269, 274-277, 476]

Christine M. Lovly, MD, PhD
Assistant Professor of Medicine, Division of Hematology-Oncology; Assistant Professor of Cancer Biology, Vanderbilt Ingram Cancer Center; Vanderbilt University Medical Center, Nashville, Tennessee [74]

Daniel H. Lowenstein, MD
Dr. Robert B. and Mrs. Ellinor Aird Professor of Neurology; Director, Epilepsy Center; Executive Vice Chancellor and Provost, University of California, San Francisco, San Francisco, California [415, 418, V6]

Elyse E. Lower, MD
Department of Internal Medicine, Division of Hematology-Oncology, University of Cincinnati, Cincinnati, Ohio [360]

Franklin D. Lowy, MD
Clyde '56 and Helen Wu Professor of Medicine and Pathology and Cell Biology, Columbia University College of Physicians and Surgeons, New York, New York [142]

Sheila A. Lukehart, PhD
Professor, Departments of Medicine and Global Health, University of Washington, Seattle, Washington [177, 178]

Lucio Luzzatto, MD, FRCP, FRCPath
Professor of Haematology, Muhimbili University of Health and Allied Sciences, Dar-es-Salaam, Tanzania; Honorary Professor of Hematology, University of Florence, Firenze, Italy [96]

Calum A. MacRae, MD, PhD
Associate Professor of Medicine, Harvard Medical School, Chief, Cardiovascular Medicine, Brigham and Women's Hospital, Boston, Massachusetts [232]

Lawrence C. Madoff, MD
Professor of Medicine, University of Massachusetts Medical School, Worcester, Massachusetts; Director, Division of Epidemiology and Immunization, Massachusetts Department of Public Health, Jamaica Plain, Massachusetts [125, 136]

Mark E. Mailliard, MD
Frederick F. Paustian Professor; Chief, Division of Gastroenterology and Hepatology, Department of Internal Medicine, University of Nebraska College of Medicine, Omaha, Nebraska [335]

Harvey J. Makadon, MD, FACP
Professor of Medicine, Harvard Medical School; Director of Education and Training Programs, The Fenway Institute, Boston, Massachusetts [393]

Barry J. Make, MD
Co-Director, COPD Program; Professor, Department of Medicine, Division of Pulmonary, Critical Care and Sleep Medicine, National Jewish Health, University of Colorado Denver School of Medicine, Denver, Colorado [286]

Mahmoud Malas, MD, MHS, FACS
Associate Professor of Surgery and Epidemiology, Johns Hopkins University; Director of Endovascular Surgery; Director of The Vascular and Endovascular Clinical Research Center, Johns Hopkins Bayview Medical Center, Director of the Center of Research Excellence and Surgical Trial, Johns Hopkins Hospital, Baltimore, Maryland [322]

Susan J. Mandel, MD, MPH
Professor of Medicine; Associate Chief, Division of Endocrinology, Diabetes and Metabolism, Perelman School of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania [375-378]

Brian F. Mandell, MD, PhD
Professor and Chairman of Medicine, Cleveland Clinic Lerner College of Medicine, Department of Rheumatic and Immunologic Disease, Cleveland Clinic, Cleveland, Ohio [367]

Lionel A. Mandell, MD, FRCPC
Professor Emeritus of Medicine, McMaster University, Hamilton, Ontario, Canada [121]

Geoffrey T. Manley, MD, PhD
Professor and Vice Chairman of Neurological Surgery, University of California, San Francisco; Chief of Neurosurgery, Zuckerberg San Francisco General Hospital and Trauma Center; Co-Director, Brain and Spinal Injury Center, University of California, San Francisco, San Francisco, California [435]

Douglas L. Mann, MD
Lewin Chair and Chief, Cardiovascular Division; Professor of Medicine, Cell Biology and Physiology, Washington University School of Medicine, Cardiologist-in-Chief, Barnes Jewish Hospital, St. Louis, Missouri [252]

JoAnn E. Manson, MD, DrPH
Professor of Medicine and the Michael and Lee Bell Professor of Women's Health, Harvard Medical School; Chief, Division of Preventive Medicine, Brigham and Women's Hospital, Boston, Massachusetts [388]

Eleftheria Maratos-Flier, MD
Professor of Medicine, Harvard Medical School; Division of Endocrinology, Beth Israel Deaconess Medical Center, Boston, Massachusetts [394]

Daniel B. Mark, MD, MPH
Professor of Medicine, Duke University Medical Center; Director, Outcomes Research, Duke Clinical Research Institute, Durham, North Carolina [3]

Alexander G. Marneros, MD, PhD
Associate Professor, Department of Dermatology, Harvard Medical School; Cutaneous Biology Research Center, Massachusetts General Hospital, Boston, Massachusetts [57]

Jeanne M. Marrazzo, MD, MPH, FACP, FIDSA
C. Glenn Cobbs, MD, Endowed Professor in Infectious Diseases; Director, Division of Infectious Diseases, University of Alabama at Birmingham School of Medicine, Birmingham, Alabama [131]

Thomas Marrie, MD
Dean Emeritus, Faculty of Medicine, Dalhousie University, Halifax, Nova Scotia, Canada [182]

Gary J. Martin, MD
Raymond J. Langenbach, MD Professor of Medicine; Vice Chairman for Faculty Affairs, Department of Medicine, Northwestern University Feinberg School of Medicine, Chicago, Illinois [4]

Joseph B. Martin, MD, PhD
Lefler R. and Anne G. Lefler Professor of Neurobiology, Emeritus, Harvard Medical School, Boston, Massachusetts [415]

Susan Maslanka, PhD
Enteric Diseases Laboratory Branch, Centers for Disease Control and Prevention, Atlanta, Georgia [148]

Anthony F. Massaro, MD
Instructor, Harvard Medical School; Director, Medical Intensive Care Unit, Division of Pulmonary and Critical Care, Brigham and Women's Hospital, Boston, Massachusetts [296]

Henry Masur, MD
Clinical Professor of Medicine, George Washington University School of Medicine, Washington, DC; Chief, Critical Care Medicine Department, Clinical Center, National Institutes of Health, Bethesda, Maryland [215]

Robert J. Mayer, MD
Faculty Vice President for Academic Affairs, Dana-Farber Cancer Institute; Stephen B. Kay Family Professor of Medicine, Harvard Medical School, Boston, Massachusetts [76, 77]

Alexander J. McAdam, MD, PhD
Associate Professor of Pathology, Harvard Medical School; Medical Director, Infectious Diseases Diagnostic Laboratory, Children's Hospital of Boston, Boston, Massachusetts [S13]

Calvin O. McCall, MD
Clinical Professor, Department of Dermatology, Virginia Commonwealth University Medical Center, Richmond, Virginia; Chief, Dermatology Section, Hunter Holmes McGuire Veterans Affairs Medical Center, Richmond, Virginia [53, A4]

John F. McConville, MD
Associate Professor of Medicine; Director, Internal Medicine Residency Program; Vice Chair for Education, University of Chicago, Department of Medicine, Chicago, Illinois [290]

Michael McCrea, PhD, ABPP
Professor and Eminent Scholar; Vice Chair of Research; Director of Brain Injury Research, Department of Neurosurgery, Medical College of Wisconsin, Milwaukee, Wisconsin [435]

Kathleen M. McKibbin, MD
Staff Physician, Northwestern University Health Services, Evanston, Illinois [2]

Kevin T. McVary, MD, FACS
Professor and Chairman, Division of Urology, Southern Illinois University School of Medicine, Springfield, Illinois [390]

Paul S. Mead, MD, MPH
Chief, Bacterial Diseases Branch, Division of Vector-Borne Diseases, Centers for Disease Control and Prevention, Fort Collins, Colorado [165]

John N. Mecchella, DO, MPH
Assistant Professor of Medicine, Geisel School of Medicine at Dartmouth, Dartmouth-Hitchcock Medical Center, Lebanon, New Hampshire [410]

Mandeep R. Mehra, MD, FACC, FESC, FHFSA, FRCP
Professor of Medicine, Harvard Medical School; Medical Director, Brigham and Women's Hospital Heart and Vascular Center; Executive Director, Center for Advanced Heart Disease, Brigham and Women's Hospital; Editor-in-Chief, *The Journal of Heart and Lung Transplantation*, Boston, Massachusetts [253, 255]

Shlomo Melmed, MB ChB, MACP, FRCP
Executive Vice President and Dean of the Medical Faculty; Professor of Medicine, Cedars-Sinai Medical Center, Los Angeles, California [371-373]

Robert O. Messing, MD
Professor of Neurology and Neuroscience; Director, Waggoner Center for Alcohol and Addiction Research, University of Texas at Austin, Austin, Texas [443]

Nancy Messonnier, MD (CAPT, USPHS)
Director, National Center for Immunization and Respiratory Diseases, Office of Infectious Diseases, Centers for Disease Control and Prevention, Atlanta, Georgia [118]

M.-Marsel Mesulam, MD
Professor of Neuroscience and Neurology, Cognitive Neurology and Alzheimer's Disease Center, Northwestern University Feinberg School of Medicine, Chicago, Illinois [26]

Gregory F. Michaud, MD
Chief, Arrhythmia Section; Professor of Medicine, Vanderbilt University School of Medicine, Nashville, Tennessee [241-246]

Robert G. Micheletti, MD
Assistant Professor of Dermatology and Medicine, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, Pennsylvania [56]

Aaron W. Michels, MD
Associate Professor of Pediatrics and Medicine, Barbara Davis Center for Childhood Diabetes, University of Colorado School of Medicine, Aurora, Colorado [382]

Susan Miesfeldt, MD
Medical Oncology, Medical Director, Cancer Risk and Prevention Clinic, Maine Medical Center, Scarborough, Maine [457]

Edgar L. Milford, MD
Associate Professor of Medicine, Harvard Medical School; Director, Tissue Typing Laboratory, Brigham and Women's Hospital, Boston, Massachusetts [307]

Bruce L. Miller, MD
A. W. and Mary Margaret Clausen Distinguished Professor of Neurology, Memory and Aging Center, Global Brain Health Institute, University of California, San Francisco School of Medicine, San Francisco, California [24, 25, 423-426, 430, V2]

Samuel I. Miller, MD
Professor, Departments of Microbiology, Medicine and Genome Sciences, University of Washington, Seattle, Washington [160]

Jyoti Mishra, PhD
Department of Psychiatry, University of California, San Diego, La Jolla, California [477]

Simon J. Mitchell, MB ChB, PhD, FUHM, FANZCA
Professor, Department of Anaesthesiology, University of Auckland and Auckland City Hospital, Auckland, New Zealand [S11]

Babak Mokhlesi, MD, MSc
Professor of Medicine, Section of Pulmonary and Critical Care; Director, Sleep Disorders Center, Director, Sleep Medicine Fellowship, University of Chicago, Chicago, Illinois [290]

Thomas A. Moore, MD, FACP, FIDSA
Clinical Professor of Medicine, University of Kansas School of Medicine, Wichita, Kansas [217]

Alison Morris, MD, MS
Professor, Vice Chair for Clinical Research, Department of Medicine and Immunology; Director, University of Pittsburgh HIV Lung Research Center, Division of Pulmonary, Allergy, and Critical Care Medicine, University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania [215]

David A. Morrow, MD, MPH
Professor of Medicine, Harvard Medical School; Director, Samuel A. Levine Cardiac Intensive Care Unit, Cardiovascular Division, Brigham and Women's Hospital, Boston, Massachusetts [11]

William J. Moss, MD, MPH
Professor, Departments of Epidemiology, International Health, and Molecular Microbiology and Immunology, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland [200]

Robert J. Motzer, MD
Attending Physician, Genitourinary Oncology Service, Department of Medicine, Memorial Sloan Kettering Cancer Center, New York, New York [81]

David B. Mount, MD
Assistant Professor of Medicine, Harvard Medical School; Renal Division, Brigham and Women's Hospital, Renal Division, Boston VA Healthcare System, Boston, Massachusetts [48, 49, S1]

Haralampos M. Moutsopoulos, MD, FACP, FRCP(hc), Master ACR
Professor Emeritus, Medical School, National University of Athens, Athens, Greece [350, 354, 357]

L. Silvia Munoz-Price, MD, PhD
Professor of Medicine, Department of Medicine, Division of Infectious Diseases, Enterprise Epidemiologist, Froedtert & Medical College of Wisconsin, Milwaukee, Wisconsin [157]

Nikhil C. Munshi, MD
Professor of Medicine, Harvard Medical School; Boston VA Healthcare System; Director of Basic and Correlative Sciences; Associate Director, Jerome Lipper Myeloma Center, Dana-Farber Cancer Institute, Boston, Massachusetts [107]

John R. Murphy, PhD
Professor of Medicine and Microbiology, Boston University School of Medicine, Boston Massachusetts, and Adjunct Professor of Medicine, Johns Hopkins School of Medicine, Baltimore, Maryland [145]

Timothy F. Murphy, MD
SUNY Distinguished Professor; Director, UB Clinical and Translational Research Center; Senior Associate Dean for Clinical and Translational Research; Jacobs School of Medicine and Biomedical Sciences; University at Buffalo, State University of New York, Buffalo, New York [152]

Barbara E. Murray, MD
J. Ralph Meadows Professor and Director, Division of Infectious Diseases; Professor of Microbiology and Molecular Genetics, McGovern Medical School at the University of Texas Health Science Center, Houston, Texas [144]

Joseph A. Murray, MD
Professor of Medicine, Departments of Internal Medicine and Immunology, Mayo Clinic School of Medicine, Rochester, Minnesota; Adjunct Professor of Pediatrics, University of Southern Denmark, Odense, Denmark [42]

Mark B. Mycyk, MD
Associate Professor, Department of Emergency Medicine, Northwestern University Feinberg School of Medicine; Research Director, Toxikon Consortium, Cook County Health and Hospitals System, Chicago, Illinois [450]

Avindra Nath, MD
Chief, Section of Infections of the Nervous System; Clinical Director, National Institute of Neurological Disorders and Stroke (NINDS), National Institutes of Health, Bethesda, Maryland [134]

Edward T. Naureckas, MD
Professor of Medicine, Section of Pulmonary and Critical Care Medicine, University of Chicago, Chicago, Illinois [279]

Eric G. Neilson, MD
Lewis Landsberg Dean and Vice President of Medical Affairs, Feinberg School of Medicine, Northwestern University, Chicago, Illinois [303, 308, A3]

Tuhina Neogi, MD, PhD
Professor of Medicine, Sections of Clinical Epidemiology and Rheumatology, Department of Medicine, Boston University School of Medicine; Professor of Epidemiology, Department of Epidemiology, Boston University School of Public Health, Boston, Massachusetts [364]

Gerald T. Nepom, MD, PhD
Professor (Affiliate), University of Washington School of Medicine; Director, Immune Tolerance Network, Benaroya Research Institute, Seattle, Washington [343]

Eric J. Nestler, MD, PhD
Nash Family Professor, Department of Neuroscience; Director, Friedman Brain Institute; Dean for Academic and Scientific Affairs, Ichan School of Medicine at Mount Sinai, New York, New York [443]

Hartmut P. H. Neumann, MD
Unit for Preventive Medicine, Department of Nephrology and General Medicine, Albert-Ludwigs University of Freiburg, Freiburg, Germany [380]

Jonathan Newmark, MD, MM
Colonel (retired), Medical Corps, U.S. Army; Adjunct Professor of Neurology, F. Edward Hebert School of Medicine, Uniformed Services University of the Health Sciences, Bethesda, Maryland; Department of Neurology, Washington DC Veterans' Affairs Medical Center, Washington, DC [S3]

Kevin D. Niswender, MD, PhD
Associate Professor of Medicine, Vanderbilt University Medical Center, Nashville, Tennessee [396, 397]

Rathel L. Nolan, III, MD
Professor, Department of Medicine, Division of Infectious Diseases, University of Mississippi Medical Center, Jackson, Mississippi [209]

Robert L. Norris, MD
Professor Emeritus, Department of Emergency Medicine; Stanford University School of Medicine, Stanford, California [451]

Scott A. Norton, MD, MPH, MSc
Chief of Dermatology, Children's National Health Systems, Washington, DC [452]

Thomas B. Nutman, MD
Head, Helminth Immunology Section, Head, Clinical Parasitology Section, Laboratory of Parasitic Diseases, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, Maryland [227, 228]

Jose A. Obeso, MD
Professor of Neurology and Director, CIINAC, Hospital de Madrid; Medical School, CEU-San Pablo, Madrid, Spain [428]

Katherine L. O'Brien, MD, MPH
Professor, Department of International Health, Bloomberg School of Public Health, Johns Hopkins University, Baltimore, Maryland [141]

Max R. O'Donnell, MD, MPH
Assistant Professor of Medicine and Epidemiology, Division of Pulmonary, Allergy, and Critical Care Medicine, Columbia University Medical Center, New York, New York [176]

Nigel O'Farrell, MD, FRCP
Consultant Physician, London North West Healthcare NHS Trust, London, United Kingdom [168]

Jennifer Ogar, MS CCC-SLP
Speech-Language Pathologist, Memory and Aging Center, University of California, San Francisco, San Francisco, California [V2]

Patrick T. O'Gara, MD
Professor of Medicine, Harvard Medical School; Watkins Family Distinguished Chair in Cardiology, Brigham and Women's Hospital, Boston, Massachusetts [38, 234, 256-263]

C. Warren Olanow, MD, FRCPC, FRCP(hon)
Professor and Chairman Emeritus, Department of Neurology; Professor Emeritus, Department of Neuroscience, Mount Sinai School of Medicine, New York, New York; CEO, Clintrex, LLC [427, 428]

Andrew B. Onderdonk, PhD
Professor of Pathology, Harvard Medical School; Brigham and Women's Hospital, Boston, Massachusetts [S13]

Joseph G. Ouslander, MD
Professor and Senior Associate Dean for Geriatric Programs; Chair, Department of Integrated Medical Sciences; Interim Director, FAU Internal Medicine Residency Program, Charles E. Schmidt College of Medicine; Professor (Courtesy), Christine E. Lynn College of Nursing, Florida Atlantic University, Boca Raton, Florida [464]

Chung Owyang, MD
H. Marvin Pollard Professor of Internal Medicine; Professor of Molecular and Integrative Physiology; Chief, Division of Gastroenterology and Hepatology, University of Michigan Health System, Ann Arbor, Michigan [314, 320]

Umesh D. Parashar, MBBS, MPH
Lead, Viral Gastroenteritis Epidemiology Team, Division of Viral Diseases, National Center for Immunization and Respiratory Diseases, Centers for Disease Control and Prevention, Atlanta, Georgia [198]

Shreyaskumar R. Patel, MD
Robert R. Herring Distinguished Professor of Medicine; Center Medical Director, Sarcoma Center, The University of Texas M.D. Anderson Cancer Center, Houston, Texas [87]

Gustav Paumgartner, MD
Professor Emeritus of Medicine, University of Munich, Munich, Germany [339]

M. Luisa Pedro-Botet, MD, PhD
Professor of Medicine, Autonomous University of Barcelona; Head of the Infectious Diseases Unit; Investigator of CIBEres, Instituto de Investigación Carlos III; Germans Trias i Pujol University Hospital, Badalona, Barcelona, Spain [154]

David A. Pegues, MD
Professor of Medicine, Division of Infectious Diseases, Perelman School of Medicine, University of Pennsylvania, Philadelphia, Pennsylvania [160]

Florencia Pereyra, MD
Instructor in Medicine, Harvard Medical School; Associate Physician, Infectious Disease Division, Brigham and Women's Hospital, Boston, Massachusetts [136]

Jeannine M. Petersen, PhD
Research Microbiologist, Division of Vector-Borne Diseases, Centers for Disease Control and Prevention, Fort Collins, Colorado [165]

Karran A. Phillips, MD, MSc
Clinical Director, National Institute on Drug Abuse, National Institutes of Health, Baltimore, Maryland [447]

Gerald B. Pier, PhD
Professor of Medicine (Microbiology and Immunobiology), Harvard Medical School; Brigham and Women's Hospital, Division of Infectious Diseases, Boston, Massachusetts [116]

Richard J. Pollack, PhD
Instructor, Department of Immunology and Infectious Disease, Harvard School of Public Health, Boston, Massachusetts; Senior Environmental Public Health Officer, Department of Environmental Health and Safety, Harvard University, Cambridge, Massachusetts; President and Chief Scientific Officer, IdentifyUS LLC, Needham, Massachusetts [452]

Martin R. Pollak, MD
Professor of Medicine, Harvard Medical School; Beth Israel Deaconess Medical Center, Boston, Massachusetts [309]

Andrew J. Pollard, PhD, FRCPCH, FMedSci
Professor of Paediatric Infection and Immunity, Department of Paediatrics, University of Oxford, Oxford, United Kingdom [150]

Reuven Porat, MD
Professor of Medicine, Department of Internal Medicine, Tel Aviv Souarsky Medical Center; Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel [15]

Daniel A. Portnoy, PhD
Professor, Department of Molecular and Cell Biology and the School of Public Health, University of California, Berkeley, Berkeley, California [146]

John T. Potts, Jr., MD
Jackson Distinguished Professor of Clinical Medicine, Harvard Medical School; Director of Research and Physician-in-Chief Emeritus, Massachusetts General Hospital, Boston, Massachusetts [403]

Lawrie W. Powell, AC, MD, PhD
Professor Emeritus, The University of Queensland and the Royal Brisbane and Women's Hospital Queensland, Australia [407]

Alvin C. Powers, MD
Joe C. Davis Chair in Biomedical Science; Professor of Medicine, Molecular Physiology and Biophysics; Director, Vanderbilt Diabetes Center; Chief, Division of Diabetes, Endocrinology, and Metabolism, Vanderbilt University Medical Center, Nashville, Tennessee [396-398]

Daniel S. Pratt, MD
Assistant Professor of Medicine, Harvard Medical School; Clinical Director, Liver Transplantation; Director, Autoimmune and Cholestatic Liver Center, Massachusetts General Hospital, Boston, Massachusetts [45, 330]

Michael B. Prentice, MB ChB, PhD, MRCP(UK), FRCPath, FFPRCPI
Professor of Medical Microbiology, Departments of Microbiology and Pathology, University College Cork, Cork, Ireland [166]

Darwin J. Prockop, MD, PhD
Professor and Director, Institute for Regenerative Medicine, Texas A&M Health Science Center, Temple, Texas [406]

Stanley B. Prusiner, MD
Director, Institute for Neurodegenerative Diseases; Professor, Department of Neurology, UCSF Weill Institute for Neurosciences, University of California, San Francisco, San Francisco, California; Professor, Department of Biochemistry and Biophysics, University of California, San Francisco, California [417, 430]

Thomas C. Quinn, MD
Professor of Medicine, Johns Hopkins University, Baltimore, Maryland; Senior Investigator, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Bethesda, Maryland [184]

Gil D. Rabinovici, MD
Ed Fein and Pearl Landrith Distinguished Professor, Memory and Aging Center, Department of Neurology, University of California, San Francisco, San Francisco, California [V2]

Daniel J. Rader, MD
Seymour Gray Professor of Molecular Medicine; Chair, Department of Genetics; Chief, Division of Translational Medicine and Human Genetics, Department of Medicine, Perelman School of Medicine at the University of Pennsylvania, Philadelphia, Pennsylvania [400]

Kaitlin Rainwater-Lovett, PhD, MPH
Senior Staff Scientist, Applied Biological Sciences, Asymmetric Operations, Johns Hopkins University Applied Physics Laboratory, Laurel, Maryland [200]

Sanjay Ram, MBBS
Professor of Medicine, Division of Infectious Diseases and Immunology, University of Massachusetts Medical School, Worcester, Massachusetts [151]

Reuben Ramphal, MD
Adjunct Professor of Medicine, Division of Infectious Diseases and Global Medicine, University of Florida College of Medicine, Gainesville, Florida [159]

Kathryn Moynihan Ramsey, PhD
Research Assistant Professor, Division of Endocrinology, Metabolism and Molecular Medicine, Department of Medicine, Feinberg School of Medicine, Northwestern University, Chicago, Illinois [475]

Agam K. Rao, MD
Medical Officer, Division of Foodborne, Waterborne, and Environmental Diseases, Centers for Disease Control and Prevention, Atlanta, Georgia [148]

Kumanan Rasanathan, MBChB, MPH, FAFPHM
Coordinator, Health Systems (HSD), World Health Organization, Phnom Penh, Cambodia [462]

James P. Rathmell, MD
Leroy D. Vandam Professor of Anaesthesia, Harvard Medical School; Chair, Department of Anesthesiology, Perioperative and Pain Medicine, Brigham and Women's Hospital, Boston, Massachusetts [10]

Mario C. Raviglione, FRCP (UK), FERS, Hon RSP (RF)
Director, Global Health Centre, Milan Institute for Innovative Health Research—MIC, University of Milan, Milan, Italy [173]

Divya Reddy, MD, MPH
Pulmonary Division, Albert Einstein College of Medicine/Montefiore Medical Center, Bronx, New York [176]

Susan Redline, MD, MPH
Peter C. Farrell Professor of Sleep Medicine, Harvard Medical School; Brigham and Women's Hospital; Beth Israel Deaconess Medical Center, Boston, Massachusetts [291]

Sharon L. Reed, MD, MSCTM, D(ABMM)
Professor of Pathology and Medicine; Director, Microbiology Laboratory, University of California, San Diego School of Medicine, La Jolla, California [216, 218, S14]

Susan E. Reef, MD
Team Leader, Rubella Team, Global Immunization Division, Centers for Disease Control and Prevention, Atlanta, Georgia [201]

John J. Reilly, Jr., MD
Richard Krugman Endowed Chair; Vice Chancellor for Health Affairs; Dean, University of Colorado School of Medicine, Aurora, Colorado [A12]

John T. Repke, MD, FACOG
University Professor and Chairman, Department of Obstetrics and Gynecology, Pennsylvania State University College of Medicine; Obstetrician-Gynecologist In-Chief, The Milton S. Hershey Medical Center, Hershey, Pennsylvania [466]

Victor I. Reus, MD
Distinguished Professor of Psychiatry, University of California, San Francisco School of Medicine; UCSF Weill Institute for Neurosciences, San Francisco, California [444]

Bernardo Reyes, MD
Assistant Professor, Department of Integrated Medical Sciences; Assistant Director, Internal Medicine Residency Program, Charles E Schmidt College of Medicine, Florida Atlantic University, Boca Raton, Florida [464]

Joseph J. Rhatigan, MD
Associate Professor, Harvard Medical School, Harvard School of Public Health; Associate Chief, Division of Global Health Equity, Brigham and Women's Hospital, Boston, Massachusetts [460]

Peter A. Rice, MD
Professor of Medicine, Division of Infectious Diseases and Immunology, University of Massachusetts Medical School, Worcester, Massachusetts [151]

Michael R. Rickels, MD, MS
Associate Professor of Medicine, Division of Endocrinology, Diabetes and Metabolism, University of Pennsylvania Perelman School of Medicine, Philadelphia, Pennsylvania [397, 398]

Elizabeth Robbins, MD
Clinical Professor of Pediatrics, University of California, San Francisco, San Francisco, California [S9]

Gary L. Robertson, MD
Emeritus Professor of Medicine, Northwestern University School of Medicine, Chicago, Illinois [374]

Dan M. Roden, MD
Professor of Medicine, Pharmacology, and Biomedical Informatics; Director, Oates Institute for Experimental Therapeutics; Senior Vice-President for Personalized Medicine, Vanderbilt University Medical Center, Nashville, Tennessee [63, 64]

James A. Romano, Jr., PhD, DABT, ATS
Principal Senior Life Scientist Advisor, Tunnell Government Services, Inc., Rockville, Maryland [S3]

Karen L. Roos, MD
John and Nancy Nelson Professor of Neurology; Professor of Neurological Surgery, Indiana University School of Medicine, Indianapolis, Indiana [132, 133, 135]

Allan H. Ropper, MD, FRCP, FACP
Professor of Neurology, Harvard Medical School; Raymond D. Adams Master Clinician; Executive Vice Chair, Department of Neurology, Brigham and Women's Hospital, Boston, Massachusetts [300]

Rossana Rosa, MD
Adjunct Clinical Assistant Professor in Medicine, University of Iowa Carver College of Medicine; Infectious Diseases Physician, UnityPoint Health, Des Moines, Iowa [157]

Ivan O. Rosas, MD
Associate Professor of Medicine, Harvard Medical School; Department of Medicine, Division of Pulmonary and Critical Care Medicine, Brigham and Women's Hospital, Boston, Massachusetts [287]

Misha Rosenbach, MD
Assistant Professor, Perelman School of Medicine at the University of Pennsylvania, Departments of Dermatology and Internal Medicine, Hospital of the University of Pennsylvania, Philadelphia, Pennsylvania [56]

Roger N. Rosenberg, MD
Zale Distinguished Chair and Professor of Neurology, Department of Neurology, University of Texas Southwestern Medical Center, Dallas, Texas [431, S10]

Myrna R. Rosenfeld, MD, PhD
Institut d'Investigacions Biomèdiques August Pi i Sunyer, University of Barcelona, Barcelona, Spain; Adjunct Professor, University of Pennsylvania, Philadelphia, Pennsylvania [90]

Michael A. Rubin, MD, PhD
Professor of Medicine, University of Utah School of Medicine, Salt Lake City, Utah [31]

Steven A. Rubin, PhD
Chief, Laboratory of Method Development, Center for Biologics Evaluation and Research, Food and Drug Administration, Silver Spring, Maryland [202]

Robert M. Russell, MD
Professor Emeritus of Medicine and Nutrition, Tufts University Friedman School of Nutrition Science and Policy; Jaharis Family Center for Biomedical and Nutrition Sciences, Boston, Massachusetts [326]

Thomas A. Russo, MD, CM
Staff Physician, Western New York VA Healthcare System; Professor of Medicine and Microbiology and Immunology; Vice Chair of Medicine; Head, Division of Infectious Disease, University at Buffalo, State University of New York, Buffalo, New York [156, 170, 171]

George W. Rutherford, MD, MA
Salvatore Pablo Lucia Professor of Epidemiology, Preventive Medicine, Pediatrics and History; Vice Chair, Department of Epidemiology and Biostatistics; Head, Division of Infectious Disease Epidemiology, University of California, San Francisco, San Francisco, California [461]

Edward T. Ryan, MD, FACP, FIDSA, FASTMH, FAAM
Professor of Medicine, Harvard Medical School; Professor of Immunology and Infectious Diseases, Harvard School of Public Health; Director, Global Infectious Diseases, Division of Infectious Diseases, Massachusetts General Hospital, Boston, Massachusetts [163]

David J. Salant, MD
Professor of Medicine, Boston University School of Medicine; Chief, Section of Nephrology, Boston Medical Center, Boston, Massachusetts [310]

Richard B. Saltman, PhD
Professor of Health Policy and Management, Rollins School of Public Health, Emory University, Atlanta, Georgia [5]

Martin A. Samuels, MD, DSc(hon), FAAN, MACP, FRCP, FANA
Miriam Sydney Joseph Professor of Neurology, Harvard Medical School; Chair, Department of Neurology, Brigham and Women's Hospital; Director, Brigham and Women's Institute for the Neurosciences, Boston, Massachusetts [V7]

Vaishali Sanchorawala, MD
Professor of Medicine; Director, Autologous Stem Cell Transplant Program; Associate Director, Amyloidosis Center, Boston Medical Center and Boston University School of Medicine, Boston, Massachusetts [108]

Philippe J. Sansonetti, MD
Professor, Collège de France; Institut Pasteur, Paris, France [161]

Clifford B. Saper, MD, PhD
James Jackson Putnam Professor of Neurology and Neuroscience, Harvard Medical School; Chairman, Department of Neurology, Beth Israel Deaconess Medical Center, Boston, Massachusetts [27]

Edward A. Sausville, MD, PhD
Professor of Medicine, University of Maryland School of Medicine; Associate Director for Clinical Research, Marlene and Stewart Greenbaum Cancer Center, Baltimore, Maryland [69]

Mohamed H. Sayegh, MD, FAHA, FASN, ASCI, AAP, FRCP
Raja N. Khuri Dean, Faculty of Medicine; Vice President of Medical Affairs; Professor of Medicine and Immunology, American University of Beirut; Lecturer in Medicine, Schuster Family Transplantation Research Center, Brigham and Women's Hospital, Boston, Massachusetts [307]

David T. Scadden, MD
Gerald and Darlene Jordan Professor of Medicine; Chair and Professor, Department of Stem Cell and Regenerative Biology, Harvard University; Director, Center for Regenerative Medicine; Massachusetts General Hospital, Co-director, Harvard Stem Cell Institute; Cambridge, Massachusetts [92]

Thomas E. Scammell, MD
Professor, Harvard Medical School; Beth Israel Deaconess Medical Center; Boston Children's Hospital, Boston, Massachusetts [27]

Anthony H. V. Schapira, MD, DSc, FRCP, FMedSci
Head and Professor, Department of Clinical Neurosciences, UCL Institute of Neurology; Director of UCL Royal Free Campus; Vice-Dean UCL, London, United Kingdom [427]

Howard I. Scher, MD
Professor of Medicine, Joan and Sanford Weill College of Medicine of Cornell University; D. Wayne Calloway Chair in Urologic Oncology; Attending Physician and Chief, Genitourinary Oncology Service, Department of Medicine, Memorial Sloan-Kettering Cancer Center, New York, New York [83]

Anne Schuchat, MD
RADM, U.S. Public Health Service; Assistant Surgeon General, Centers for Disease Control and Prevention, Atlanta, Georgia [118]

Marc A. Schuckit, MD
Distinguished Professor of Psychiatry, School of Medicine, University of California, San Diego, La Jolla, California [445]

H. Ralph Schumacher,† Jr., MD
Professor of Medicine, Division of Rheumatology, University of Pennsylvania, School of Medicine, Philadelphia, Pennsylvania [365]

William W. Seeley, MD
Professor of Neurology and Pathology, Memory and Aging Center, University of California, San Francisco, San Francisco, California [25, 423-426]

Julian L. Seifter, MD
Associate Professor of Medicine, Harvard Medical School; Brigham and Women's Hospital, Boston, Massachusetts [313]

Jaime Sepulveda, MD, MPH, DSc
Haile T. Debas Distinguished Professor of Global Health; Director, Institute for Global Health Sciences, University of California, San Francisco, San Francisco, California [461]

Christopher W. Seymour, MD, MSc
Assistant Professor, Department of Critical Care and Emergency Medicine; The CRISMA Center, University of Pittsburgh School of Medicine, Pittsburgh, Pennsylvania [297]

Ankoor Shah, MD
Assistant Professor, Department of Medicine, Division of Rheumatology and Immunology, Duke University Medical Center, Durham, North Carolina [351]

Erica S. Shenoy, MD, PhD
Assistant Professor of Medicine, Harvard Medical School; Associate Chief, Infection Control Unit, Massachusetts General Hospital, Boston, Massachusetts [139]

Kanade Shinkai, MD, PhD
Associate Professor, Department of Dermatology, University of California, San Francisco, San Francisco, California [56]

Edwin K. Silverman, MD, PhD
Professor of Medicine, Harvard Medical School; Chief, Channing Division of Network Medicine, Department of Medicine, Brigham and Women's Hospital, Boston, Massachusetts [286]

Karl L. Skorecki, MD, FRCP(C), FASN
Annie Chutick Professor in Medicine (Nephrology); Director, Rappaport Research Institute, Technion-Israel Institute of Technology; Director, Medical and Research Development, Rambam Health Care Campus, Haifa, Israel [305, 472]

Wade S. Smith, MD, PhD
Professor of Neurology, Daryl R. Gress Endowed Chair of Neurocritical Care and Stroke; Director, University of California, San Francisco Neurovascular Service, San Francisco, California [301, 302, 419-421]

Kelly A. Soderberg, PhD, MPH
Associate Director, Duke Center for HIV/AIDS Vaccine Immunology-Immunogen Discovery, Duke Human Vaccine Institute, Duke University, Durham, North Carolina [342]

Scott D. Solomon, MD
Professor, Harvard Medical School; Director, Noninvasive Cardiology, Brigham and Women's Hospital, Boston, Massachusetts [236, A8]

Julian Solway, MD
Walter L. Palmer Distinguished Service Professor of Medicine and Pediatrics, Dean for Translational Medicine, Biological Sciences Division; Vice Chair for Research, Department of Medicine; Chair, Committee on Molecular Medicine, University of Chicago, Chicago, Illinois [279, 290]

Michael F. Sorrell, MD
UNMC Distinguished Chair in Internal Medicine, University of Nebraska Medical Center, Omaha, Nebraska [335]

Eric J. Sorscher, MD
Hertz Professor of Cystic Fibrosis Research, Emory University, Georgia Research Alliance Eminent Scholar, Atlanta, Georgia [285]

Brad Spellberg, MD, FIDSA, FACP
Chief Medical Officer, LAC+USC Medical Center; Associate Dean for Clinical Affairs; Professor of Clinical Medicine, Division of Infectious Diseases, Keck School of Medicine at USC, Los Angeles, California [213]

Jerry L. Spivak, MD
Professor of Medicine and Oncology, Hematology Division, Johns Hopkins University School of Medicine, Baltimore, Maryland [99]

David D. Spragg, MD
Associate Professor, Department of Medicine, Johns Hopkins University, Baltimore, Maryland [238-240]

David Spriggs, MD, FACP, FASCO
Faculty Member, Harvard Medical School; Program Director of Gynecologic Oncology at the Massachusetts General Hospital Cancer Center, Boston, Massachusetts [85]

E. William St. Clair, MD
Professor of Medicine and Immunology, Department of Medicine, Duke University Medical Center, Durham, North Carolina [351]

John M. Stafford, MD, PhD
Associate Professor of Medicine, Diabetes and Endocrinology, Vanderbilt University School of Medicine, Nashville, Tennessee [398]

Matthew W. State, MD, PhD
Oberndorf Family Distinguished Professor in Psychiatry; Chair, Department of Psychiatry; Director, Langley Porter Psychiatric Institute and Hospital, Weill Institute for Neurosciences, University of California, San Francisco, San Francisco, California [443]

Allen C. Steere, MD
Professor of Medicine, Harvard Medical School; Massachusetts General Hospital, Boston, Massachusetts [181]

Dennis L. Stevens, MD, PhD
Professor of Medicine, University of Washington School of Medicine, Seattle, Washington; ACOS for Research and Development, Veterans Affairs Medical Center, Boise, Idaho [124, 149]

Lynne Warner Stevenson, MD
Lisa M. Jacobson Professor of Medicine; Director of Cardiomyopathy, Vanderbilt University Medical Center, Nashville, Tennessee [254]

William G. Stevenson, MD
Professor of Medicine, Vanderbilt University School of Medicine, Nashville, Tennessee [241-251, 299]

Benjamin K. Stoff, MD, MAB
Assistant Professor of Dermatology, Emory University School of Medicine, Senior Faculty Fellow, Emory Center for Ethics, Atlanta, Georgia [A4]

John H. Stone, MD, MPH
Professor of Medicine, Harvard Medical School; The Edward A. Fox Chair in Medicine; Director, Clinical Rheumatology, Massachusetts General Hospital, Boston, Massachusetts [361]

Lewis R. Sudarsky, MD
Associate Professor of Neurology, Harvard Medical School; Director, Division of Movement Disorders, Brigham and Women's Hospital, Boston, Massachusetts [23]

†Vefat etmiş

Shyam Sundar, MD, FRCP, FNA
Professor of Medicine, Institute of Medical Sciences, Banaras Hindu University, Varanasi, India [221]

Neeraj K. Surana, MD, PhD
Instructor in Pediatrics, Harvard Medical School; Assistant in Medicine, Boston Children's Hospital, Boston, Massachusetts [115, 172, 459]

Paolo M. Suter, MD, MS
Professor of Medicine, Clinic and Policlinic of Internal Medicine, University Hospital, Zurich, Switzerland [326]

Geoffrey Tabin, MD
Fairweather Foundation Endowed Chair; Professor of Ophthalmology and Global Health, Stanford University; Director, Himalayan Cataract Project, Palo Alto, California [453]

Caroline M. Tanner, MD, PhD
Professor, Department of Neurology, University of California, San Francisco; Director, Parkinson's Disease Research Education and Clinical Center, San Francisco Veteran's Affairs Health Care System, San Francisco, California [426]

Maria Carmela Tartaglia, MD
Associate Professor, Tanz Centre for Research in Neurodegenerative Diseases, University of Toronto, Toronto, Ontario, Canada [V2]

Joel D. Taurog, MD
Professor of Internal Medicine, Rheumatic Diseases Division, University of Texas Southwestern Medical Center, Dallas, Texas [355]

Ayalew Tefferi, MD
Professor of Medicine and Hematology, Mayo Clinic, Rochester, Minnesota [106]

Stephen C. Textor, MD
Professor of Medicine, Division of Nephrology and Hypertension, Mayo Clinic School of Medicine, Rochester, Minnesota [272]

R. V. Thakker, FRS, FMedSci
May Professor of Medicine, Academic Endocrine Unit, University of Oxford; O.C.D.E.M., Churchill Hospital, Headington, Oxford, United Kingdom [381]

Holger Thiele, MD
Professor of Medicine, University of Luebeck, Germany, Director, University Heart Center Luebeck, Cardiology/Angiology and Intensive Care Medicine, Luebeck, Germany [298]

C. Louise Thwaites, MD, MBBS
Oxford University Clinical Research Unit, Hospital for Tropical Diseases, Ho Chi Minh City, Vietnam [147]

Pierre Tiberghien, MD, PhD
Professor of Medicine, Bourgogne Franche-Comté University; Director, Medicine and Research, Etablissement Français du Sang, Paris, France [109]

Zelig A. Tochner, MD
Professor Emeritus of Radiation Oncology, University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania [S4]

Gordon F. Tomaselli, MD
Michel Mirowski, MD Professor of Cardiology; Professor of Medicine and Cellular and Molecular Medicine; Chief, Division of Cardiology, Johns Hopkins University, Baltimore, Maryland [238-240]

Karina A. Top, MD, MS
Assistant Professor of Pediatrics and Community Health & Epidemiology, Dalhousie University, Halifax, Nova Scotia, Canada [155]

Mark Topazian, MD
Professor of Medicine, Mayo Clinic, Rochester, Minnesota [315, V5]

Barbara W. Trautner, MD, PhD
Associate Professor, Section of Infectious Diseases, Department of Medicine, Baylor College of Medicine; Center for Innovations in Quality, Effectiveness, and Safety, Michael E. DeBakey Veterans Affairs Medical Center, Houston, Texas [130]

Elbert P. Trulock, III, MD
Rosemary and I. Jerome Flance Professor in Pulmonary Medicine, Department of Internal Medicine, Division of Pulmonary and Critical Care Medicine, Washington University School of Medicine; The Lung Transplantation Program, Barnes-Jewish Hospital, St. Louis, Missouri [292]

Kenneth L. Tyler, MD
Reuler-Lewin Family Professor and Chair of Neurology; Professor of Medicine, Immunology, and Microbiology, University of Colorado School of Medicine, Aurora, Colorado; Neurologist, Denver Veterans Affairs Medical Center, Denver, Colorado [132, 133, 135]

Walter J. Urba, MD, PhD
Physician Director of Research; Co-Director, Melanoma Program, Earle A. Chiles Research Institute, Providence Cancer Center, Portland, Oregon [72]

Prashant Vaishnava, MD
Assistant Professor of Medicine, Icahn School of Medicine at Mount Sinai Director of Quality, Mount Sinai Heart, Mount Sinai Hospital New York, New York [467]

Anne Marie Valente, MD
Associate Professor of Medicine and Pediatrics, Harvard Medical School; Director of Outpatient Services, Boston Adult Congenital Heart Disease and Pulmonary Hypertension Program, Boston Children's Hospital, Brigham and Women's Hospital, Boston, Massachusetts [264]

Jos W. M. van der Meer, MD, PhD
Professor of Medicine, Department of Internal Medicine, Radboud University Medical Center, Nijmegen, The Netherlands [17, 442]

Edouard Vannier, PharmD, PhD
Assistant Professor, Division of Geographic Medicine and Infectious Diseases, Department of Medicine, Tufts Medical Center and Tufts University School of Medicine, Boston, Massachusetts [220]

Gauri R. Varadhachary, MD
Professor, Department of Gastrointestinal Medical Oncology, The University of Texas M.D. Anderson Cancer Center, Houston, Texas [88]

John Varga, MD
John Hughes Professor of Medicine, Northwestern University Feinberg School of Medicine, Chicago, Illinois [353]

Christy A. Varughese, PharmD, BCPS
Clinical Pharmacy Specialist; Co-Director, Antimicrobial Stewardship Program, Department of Pharmacy, Rush University Medical Center, Chicago, Illinois [139]

David J. Vaughn, MD
Genitourinary Medical Oncology Professor, Perelman School of Medicine at the University of Pennsylvania, Perelman Center for Advanced Medicine, Philadelphia, Pennsylvania [84]

Birgitte Jyding Vennervald, MD, MSA
Professor, Section for Parasitology and Aquatic Pathobiology, Faculty of Health and Medical Sciences, University of Copenhagen, Copenhagen, Denmark [229]

Luciano Villarinho, MD
Chief of Radiology, Department of Tacchini Hospital—Bento Goncalves, Rio Grande do Sul, Brazil [A16]

Bert Vogelstein, MD
Professor and Director, Ludwig Center at Johns Hopkins University School of Medicine, Baltimore, Maryland; Investigator, Howard Hughes Medical Institute, Chevy Chase, Maryland; Scholar, Lustgarten Foundation For Cancer Research, Bethpage, New York [67]

Everett E. Vokes, MD
John E. Ultmann Professor; Chairman, Department of Medicine; Physician-in-Chief, University of Chicago Medicine and Biological Sciences, Chicago, Illinois [73]

Tamara J. Vokes, MD
Professor, Department of Medicine, Section of Endocrinology, University of Chicago, Chicago, Illinois [405]

Kevin G. Volpp, MD, PhD
Director of the Center for Health Incentives and Behavioral Economics; Vice Chairman for Health Policy in Medical Ethics and Health Policy; Physician, Cresencz Philadelphia VA Medical Center; Professor of Medicine and Health Care Management, Perelman School of Medicine and Wharton School, University of Pennsylvania, Philadelphia, Pennsylvania [468]

Daniel D. Von Hoff, MD, FACP, FASCO, FAACR
Physician-in-Chief, Distinguished Professor, Translational Genomics Research Institute (TGEN), Phoenix, Arizona; Virginia G. Piper Distinguished Chair for Innovative Cancer Research and Chief Scientific Officer, Honor Health Research Institute; Chief Scientific Officer, US Oncology; Senior Consultant-Clinical Investigations, City of Hope; Professor of Medicine, Mayo Clinic, Scottsdale, Arizona [79]

Jiři F. P. Wagenaar, MD, PhD
Leptospirosis Reference Center, Academic Medical Center, Medical Microbiology, Amsterdam, The Netherlands [179]

Sushrut S. Waikar, MD
Associate Professor of Medicine, Harvard Medical School; Constantine L. Hampers, MD Distinguished Chair in Renal Medicine; Director of Translational Research and Ambulatory Services, Renal Division, Brigham and Women's Hospital, Boston, Massachusetts [304]

Matthew K. Waldor, MD, PhD
Edward H. Kass Professor of Medicine, Division of Infectious Diseases, Brigham and Women's Hospital; Harvard Medical School and Howard Hughes Medical Institute, Boston, Massachusetts [163]

David H. Walker, MD
The Carmage and Martha Walls Distinguished University Chair in Tropical Diseases; Professor, Department of Pathology; Executive Director, Center for Biodefense and Emerging Infectious Diseases, University of Texas Medical Branch, Galveston, Texas [182]

Mark F. Walker, MD
Associate Professor, Neurology, Case Western Reserve University; Cleveland VA Medical Center, Cleveland, Ohio [19]

Fred Wang, MD
Professor of Medicine and Professor of Microbiology and Immunobiology, Harvard Medical School; Medical Director, Clinical Virology Laboratory, Brigham and Women's Hospital, Boston, Massachusetts [185, 191]

John W. Warren, MD
Professor of Medicine, University of Maryland School of Medicine, Baltimore, Maryland [47]

Aaron B. Waxman, MD, PhD
Associate Professor of Medicine, Harvard Medical School; Executive Director, Center for Pulmonary Heart Disease; Director, Pulmonary Vascular Disease Program, Pulmonary Critical Care Medicine, Cardiovascular Medicine, Brigham and Women's Hospital, Boston, Massachusetts [277]

Michael E. Wechsler, MD, MMSc
Professor of Medicine, Division of Pulmonary, Critical Care and Sleep Medicine, National Jewish Health, Denver, Colorado [282]

Anthony P. Weetman, MD, DSc
University of Sheffield, School of Medicine Sheffield, United Kingdom [375-378]

Robert A. Weinstein, MD
The C. Anderson Hedberg, MD Professor of Internal Medicine, Rush Medical College; Chief Academic Officer, Cook County Health and Hospitals System, Chicago, Illinois [137]

Jeffrey I. Weitz, MD, FRCP(C), FRSC, FACP
Professor of Medicine and Biochemistry and Biomedical Sciences, McMaster University; Executive Director, Thrombosis and Atherosclerosis Research Institute, Hamilton, Ontario, Canada [114]

Peter F. Weller, MD
William B. Castle Professor of Medicine, Harvard Medical School; Chief, Infectious Disease Division; Chief, Allergy and Inflammation Division; Beth Israel Deaconess Medical Center, Boston, Massachusetts [224-228, 230]

Andrew Wellman, MD, PhD
Assistant Professor of Medicine, Division of Sleep Medicine, Harvard Medical School; Brigham and Women's Hospital, Boston, Massachusetts [291]

Patrick Y. Wen, MD
Professor of Neurology, Harvard Medical School; Director, Center for Neuro-Oncology, Dana-Farber Cancer Institute; Director, Division of Neuro-Oncology, Department of Neurology, Brigham and Women's Hospital, Boston, Massachusetts [86]

Michael R. Wessels, MD
John F. Enders Professor of Pediatrics; Professor of Medicine, Harvard Medical School; Chief, Division of Infectious Diseases, Boston Children's Hospital, Boston, Massachusetts [143]

L. Joseph Wheat, MD
President and Medical Director, MiraVista Diagnostics, LLC, Indianapolis, Indiana [207]

A. Clinton White, Jr., MD
Professor, Infectious Disease Division, Department of Internal Medicine, University of Texas Medical Branch, Galveston, Texas [230]

Nicholas J. White, DSc, MD, FRCP, F Med Sci, FRS
Professor of Tropical Medicine, Faculty of Tropical Medicine, Mahidol University, Mahidol-Oxford Research Unit, Bangkok, Thailand [219, A6]

Richard J. Whitley, MD
Distinguished Professor; Loeb Eminent Scholar Chair in Pediatrics; Professor of Pediatrics, Microbiology, Medicine and Neurosurgery, The University of Alabama at Birmingham, Birmingham, Alabama [188]

Michael R. Wilson, MD, MAS
Assistant Professor in Neurology, University of California San Francisco; Staff Physician, University of California San Francisco Medical Center and Zuckerberg San Francisco General Hospital, San Francisco, California [134]

Bruce U. Wintroub, MD
Professor and Chair, Department of Dermatology, University of California, San Francisco, San Francisco, California [56]

Allan W. Wolkoff, MD
The Herman Lopata Chair in Liver Disease Research; Professor of Medicine and Anatomy and Structural Biology; Associate Chair of Medicine for Research; Chief, Division of Gastroenterology and Liver Diseases; Director, Marion Bessin Liver Research Center, Albert Einstein College of Medicine and Montefiore Medical Center, Bronx, New York [331]

John B. Wong, MD
Professor of Medicine, Tufts University School of Medicine; Chief, Division of Clinical Decision Making, Department of Medicine; Tufts New England Medical Center, Boston, Massachusetts [3]

Louis Michel Wong Kee Song, MD
Professor of Medicine, Division of Gastroenterology and Hepatology, Mayo Clinic College of Medicine, Rochester, Minnesota [315, V5]

Jennifer A. Woyach, MD
Associate Professor, Division of Hematology, The Ohio State University, Columbus, Ohio [103]

Peter F. Wright, MD
Professor of Pediatrics, Geisel School of Medicine, Dartmouth College, Hanover, New Hampshire [195]

Richard Wunderink, MD
Professor, Pulmonary and Critical Care, Northwestern University Feinberg School of Medicine, Chicago, Illinois [121]

Kim B. Yancey, MD
Professor and Chair, Department of Dermatology, University of Texas Southwestern Medical Center in Dallas, Dallas, Texas [52, 55]

Baligh R. Yehia, MD, MPP, MSc
Johns Hopkins University School of Medicine, Baltimore, Maryland [393]

Janet A. Yellowitz, DMD, MPH
Associate Professor; Director, Special Care and Geriatric Dentistry, University of Maryland School of Dentistry, Baltimore, Maryland [A2]

Lam Minh Yen, MD
Director, Tetanus Intensive Care Unit, Hospital for Tropical Diseases, Ho Chi Minh City, Vietnam [147]

Neal S. Young, MD
Chief, Hematology Branch, National Heart, Lung and Blood Institute; Director, NIH Center for Human Immunology, Autoimmunity and Inflammation, National Institutes of Health, Bethesda, Maryland [98, 470]

Victor L. Yu, MD
Professor of Medicine, Department of Medicine, University of Pittsburgh Medical Center, Pittsburgh, Pennsylvania [154]

Jing Zhou, MD, PhD, FASN
Professor of Medicine, Harvard Medical School; Director, Laboratory of Molecular Genetics and Developmental Biology of Disease, Renal Division; Director, Center for Polycystic Kidney Disease Research, Brigham and Women's Hospital; Boston, Massachusetts [309]

Werner Zimmerli, MD
Professor of Medicine, Basel University; Interdisciplinary Unit of Orthopaedic Infection, Kantonspital Baselland, Liestal, Switzerland [126]

Laura A. Zimmerman, MPH
Epidemiologist, Centers for Disease Control and Prevention, Atlanta, Georgia [201]

Önsöz

Editörler, *Harrison's Principles of Internal Medicine*'nin 20. baskısını sunmaktan mutluluk duyar. Bu 20. baskı, tıpta gerçek bir dönüm noktasıdır, 68 yılı ve çok sayıda öğrenci ve klinisyen neslini kapsar. Tıp ve tıp eğitimi gelişirken, okuyucular bu klasik ders kitabının onu tıp metinleri arasında ayıran kalıcı özellikleri nasıl koruduğunu takdir edeceklerdir -hastalığın klinik sunumuna keskin bir şekilde odaklanma, patofizyoloji ve tedavinin uzman özetleri ve tedavilerin önemli noktaları. bilim ve tıbbın yükselen sınırları. Gerçekten de Harrison, tıp mesleğinde hepimizin sürekli öğrenci olduğumuz ve yaşam boyu öğrenmenin ortak hedefimiz olduğu inancını koruyor.

Harrison, kariyerleri boyunca öğrenenlere yöneliktir. Öğrenciler için, 1. Kısım, 1. Bölüm "Tıp Pratiğine" genel bir bakışla başlamaktadır. Bu giriş bölümünde editörler, klinisyenleri bilime ve tıp sanatına yönlendirme geleneğini sürdürürken, teknoloji, bilim ve klinik bakımdaki yeni gelişmeleri dahil ederken mesleğimizin değerlerini vurgulamaktadır. Kısım 2, "Başlıca Bulgular ve Hastalıkların Prezentasyonu", *Harrison*'ın imza niteliğindeki bir özelliğidir. Bu bölümler, hastaların baş ağrısı, ateş, öksürük, çarpıntı veya anemi gibi yaygın klinik durumlarla nasıl başvurduklarını betimler ve tipik semptomlar, fizik bulgular ve ayırıcı tanı hakkında genel bir bakış sağlar. Bu konulara hakimiyet, öğrencileri patofizyoloji derslerinde ve klinik stajlarında karşılaşacakları belirli hastalıklarla ilgili sonraki bölümlere hazırlar. Hastalara bakan ve yönetim kurulu sınavlarına hazırlanan asistanlar ve asistanlar için *Harrison*, uluslararası üne sahip uzmanlar tarafından yazılmış kesin bir güvenilir içerik kaynağı olmaya devam ediyor. Kursiyerlere içeriğin derinliği, kapsamlı tablolar ve aydınlatıcı rakamlar ve klinik algoritmalar güven verecektir. Birçok sınav sorusu, *Harrison*'ın bölümlerinden elde edilen temel test noktalarına dayanmaktadır. Yararlı bir yardımcı kitap olan *Harrison's Self-Assessment and Board Review,* 1000'den fazla soru içerir, doğru yanıtın kapsamlı açıklamalarını sunar ve ders kitabındaki ilgili bölüme bağlantılar sağlar. Pratisyen klinisyenler, yaşam boyu öğrenmenin bir parçası olarak sürekli değişen bir bilgi tabanına ve klinik kılavuzlara ayak uydurmalıdır. Klinisyenler, *Harrison*'ın her baskısında bölümlerin kapsamlı bir şekilde güncellendiğine güvenebilirler. Metin, klinik sorular, ayırıcı tanı ve hasta yönetimi için mükemmel bir bakım noktası referansıdır. Genişletilmiş ve ayrıntılı Tedavi bölümlerine ek olarak, *Harrison*, yaygın ancak genellikle karmaşık klinik durumların pratik yönetimine ilişkin bir uzmanın genel bakışını sağlayan "Hastaya Yaklaşım" bölümlerini dahil etme geleneğini sürdürüyor.

Bu basım, içeriğinin yanı sıra biçiminde de kapsamlı bir şekilde değiştirilmiştir. Önceki baskılarda yalnızca çevrimiçi olarak mevcut olan bölümleri yeniden birleştirdik. 20. baskı, *Harrison*'ın her bölümün sonunda, katkıda bulunanlarımız tarafından özenle seçilmiş referanslar sağlayarak, "İleri Okumalar" alıntılarının geri dönüşünü işaret ediyor. Yazarlar ve editörler, genel dahiliyeyi (ve başlıca uzmanlıkların her birini) içeren büyük miktarda bilgiyi titizlikle düzenlemesini yaptı ve sentezledi ve son derece okunabilir ve bilgilendirici iki ciltlik bir kitap haline getirdi. Okuyucular, *Harrison*'ın her zaman karakterize ettiği kısa yazı stilini ve formatın tutarlılığını takdir edeceklerdir. Bu kitap, klinik sorulara açık ve kesin cevaplar sağlama amacı ile temel bilgilere keskin bir şekilde odaklanmıştır.

Basılı kitaba ek olarak, *Harrison*, e-Kitap ve uygulama sürümleri de dahil olmak üzere birden fazla dijital platformda ve McGraw-Hill'in popüler Access Medicine (*www.accessmedicine.com*) koleksiyonu aracılığıyla çevrimiçi abonelik yoluyla mevcuttur. Dijital baskılar, bir dizi tamamlayıcı video, veri tabanı ve fotoğraf atlasının yanı sıra yeni literatür güncellemeleri, öğreticiler, animasyonlar ve tıptaki önemli konuları kapsayan sesli tartışmalar içermektedir. *Harrison's Manual of Medicine*, daha kapsamlı *Harrison's Principles of Internal Medicine*'den türetilen klinik temel bilgilerin yoğunlaştırılmış bir cep versiyonudur. *Manual* (el kitabı) ayrıca bir e-Kitap ve bir uygulama olarak ve Access Medicine aracılığıyla da mevcuttur. Bu platformlar birlikte, *Harrison*'ın referans, test hazırlığı ve bakım noktası çevrimiçi içeriğinden oluşan güçlü bir koleksiyon oluşturur.

20. baskıda, yeni bölümlerin örnekleri arasında, uzun ömürlülüğü ve esenliği artırmak için önleme ve pratik yaşam tarzı değişikliklerine odaklanan "İyi Sağlığın Teşviki"; dünyanın dört bir yanından sağlık sunum modellerinin karşılaştırmasını sağlayan "Gelişmiş Ülkelerde Sağlık Sistemleri"; hassas ilaçları ve uygun dozları seçmek için yeni yaklaşımlar uygulayan "farmakogenomik"; Klinik bakım ve tarımda antibiyotiklerin yaygın ve sıklıkla uygunsuz kullanımını vurgulayan "Antimikrobiyal Ajanlara Bakteriyel Direnç"; farklı sağlık ihtiyaçları olan topluluklar için erişim ve bakım modellerini geliştirmeye yönelik stratejilerin ana hatlarını veren "LGBT Sağlığı"; multipl skleroz ile benzerlik gösteren ancak farklı tedaviler gerektiren hastalıkları özetleyen "Nöromiyelitis Optika"; bazıları yüzyıllardır insanlığı rahatsız eden yeni bulaşıcı hastalıkların dinamik evrimini ve daha eski bozuklukların kontrol altına alınmasını inceleyen "Dünya Çapında Bulaşıcı Hastalık Modellerinde Değişiklikler"; ve "Tıbbi Konsültasyona Yaklaşım", konsültanın sevk eden klinisyenin ihtiyaçlarını karşıladığından emin olmak için pratik tavsiyeler sağlar. Bu ve diğer yeni konulara ek olarak, 20. baskı, yakın vadede tıp pratiğini değiştirecek en son bilimin habercisi olan "Yeni Keşifler" başlıklı büyüleyici yeni bir dizi bölüm sunuyor. Yeni Keşifler bölümlerinin örnekleri arasında "Telomer Hastalığı", "Hastalık ve Tedavide Epigenetiğin Rolü", "Sağlık ve Hastalıkta Sirkadiyen Biyolojinin Rolü" ve "Davranışsal Ekonomi ve Sağlık" sayılabilir.

Bu yeni konulara ek olarak, dahiliyenin her bir alt uzmanlığındaki büyük ilerlemeler bu baskıya dahil edilmiştir. Bu 20. baskıda özellikle dikkat edilmesi gereken nokta, klinik olarak pragmatik bir odaklanmanın yanı sıra patogenez için kapsamlı ve analitik bir yaklaşım sunan HIV/AIDS hakkındaki klasik bölümdeki kritik güncellemelerdir. Güncellemeler, en son tedavi protokollerini kapsamakta ve kombinasyon önleme modaliteleri konusunu ele alarak, bu bölümü HIV hastalığına ilişkin mevcut en güncel inceleme haline getirmektedir.

Okuyucular, nörodejeneratif hastalıkların kapsamının genişletildiğini, bunların sınıflandırılması ve yönetiminde önemli ilerlemelerin vurgulandığını ve bu bozukluklarda patojenik protein kümelerinin birikmesinden ve yayılmasından sorumlu yeni mekanizmaların tanımlandığını göreceklerdir. Multipl skleroz için oldukça etkili tedavilerin kullanımına yönelik pratik kılavuz, yeni baskının bir diğer önemli özelliğidir. Kronik hepatitle ilgili bölüm, kronik hepatit C virüsü hastalığının tedavisi ve tedavisi için doğrudan etkili antiviral ajanların kullanımındaki çarpıcı yeni keşifleri ayrıntılı olarak tartışır; bu ajanlar, bugün tıptaki en heyecan verici terapötik gelişmelerden bazılarından sorumludur.

İnsan Genom Projesi'nin vaadi klinik tıpta gerçekleşmeye devam ediyor. Bu kitap boyunca yansıtılır, ancak özellikle histolojik benzerlikleri paylaşan farklı varlıkları ayırt eden moleküler nozoloji dahil olmak üzere kanserlerin genetik heterojenitesini anlamamızdaki ilerlemelerle vurgulanır. Genetik araçları ayrıca spesifik genetik lezyonları ve bağışıklık sistemi aktivasyonunu hedefleyen tedavilerin kullanımı hakkında bilgi verir. Kansere genetik yatkınlığı olan hastalar için genetik danışmanlık (örneğin, BRCA 1/2), önleme stratejileri hakkında bilgi vermek ve kanser riskini azaltmaktır. Mikrobiyom hakkındaki anlayışımız, onun normal fizyoloji ve hastalık patogenezi ile ilgisi ve çeşitli hastalıkların tedavisine yönelik çıkarımları hızla genişlemektedir ve bu ilerlemeler tamamen yeniden yazılmış bir "İnsan Mikrobiyomu" bölümünde ve tamamen güncellenmiş "Mikrobiyal Genomik ve Enfeksiyon Hastalıkları" bölümünde ele alınmaktadır.. Diyabetin sınıflandırılması ve yönetimi, yeni çalışmalar, klinik kılavuzlar ve tedaviler temelinde kapsamlı bir şekilde güncellenmiştir. Testosteron yönetimi ve replasmanı için güncellenmiş kılavuzlar, yeni klinik çalışmaların sonuçlarına dayanmaktadır.

Bu kitabın ortaya çıkmasındaki emekleri için teşekkür etmemiz gereken çok sayıda insan vardır. İlk olarak, yazarlar, hastaları yönetmek için bilgilendirici ve pratik yaklaşımlar ortaya koymak için büyük miktarda bilimsel ve klinik veriyi sentezleyen güvenilir bölümler üretmek konusunda harika bir iş çıkardılar. Günümüzün bilgi açısından zengin, hızla gelişen ortamında, bu bilgilerin

güncel olmasını sağladılar. Yazarlarla iletişimi kolaylaştırmak ve *Harrison*'ın içeriğini güncel tutmamıza yardımcı olmak için her bir editörle yakın işbirliği içinde çalışan meslektaşlarımıza çok minnettarız. Özellikle Patricia Conrad, Patricia L. Duffey, Gregory K. Folkers, Julie B. McCoy, Elizabeth Robbins, Anita Rodriguez ve Stephanie Tribuna'nın uzman desteğine teşekkür etmek istiyoruz. McGraw-Hill Education'ın Profesyonel Yayıncılık grubundaki uzun süreli ortaklarımız Scott Grillo ve James Shanahan, Harrison'ın yapıcı ve dinamik evrimine ilham vererek kitabın ve ilgili ürünlerinin yeni formatlarda geliştirilmesine rehberlik etti. Yönetici Editör olarak Kim Davis, bu çok yazarlı ders kitabının karmaşık üretiminin sorunsuz ve verimli bir şekilde ilerlemesini ustaca sağlamıştır. Priscilla Beer ve Armen Ovsepyen, videolarımızın ve animasyonlarımızın yapımını denetlediler. Jeffrey Herzich, McGraw-Hill Education ekibinin diğer üyeleriyle birlikte bu yeni baskının yapımına öncülük etti.

Bu 20. baskıyı derleme ayrıcalığına sahibiz ve okuyucularımıza sunduğu her şey için heyecanlıyız. *Harrison*'ın düzenleme sürecinde çok şey öğrendik ve bu baskıyı klinik ve eğitimsel bir kaynak olarak benzersiz bir şekilde değerli bulacağınızı umuyoruz.

Editörler

Kısım Çeviri Editörleri

Kısım 1 Tıp Mesleği
Uzm. Dr. Mustafa Çelik

Kısım 2 Hastalıkların Başlıca Belirti ve Bulguları
Doç. Dr. Mücahit Emet

Kısım 3 Farmakoloji
Prof. Dr. Korkut Ulucan

Kısım 4 Onkoloji ve Hematoloji
Prof. Dr. Abdurrahman Işıkdoğan
Prof. Dr. Orhan Ayyıldız

Kısım 5 Enfeksiyon Hastalıkları
Prof. Dr. Tanju Kadir
Prof. Dr. Zülal Özkurt
Dr. Öğr. Üyesi Esra Çınar Tanrıverdi

Kısım 6 Kardiyovasküler Sistem Bozuklukları
Doç. Dr. Sinem Özyılmaz

Kısım 7 Solunum Sistemi Hastalıkları
Prof. Dr. Cüneyt Tetikkurt

Kısım 8 Yoğun Bakım
Prof. Dr. Ayşe Belin Özer

Kısım 9 Böbrek ve İdrar Yolları Hastalıkları
Uzm. Dr. Meryem Benzer

Kısım 10 Gastrointestinal Sistem Hastalıkları
Prof. Dr. İbrahim Ertuğrul

Kısım 11 İmmün Aracılı, İnflamatuvar ve Romatolojik Hastalıklar
Prof. Dr. Ömer Cevit

Kısım 12 Endokrin ve Metabolizma
Doç. Dr. Nevzat Gözel

Kısım 13 Nörolojik Hastalıklar
Uzm. Dr. Aylin Öztürk Yavuz

Kısım 14 Zehirlenmeler, İlaç Dozaşımları ve Envenomasyonları (Sokularak Zehirlenmeler)
Doç. Dr. Tarık Ocak

Kısım 15 Çevresel Maruziyetlerle İlişkili Hastalıklar
Prof. Dr. Teoman Akçay

Kısım 16 Genler, Çevre ve Hastalık
Prof. Dr. Korkut Ulucan

Kısım 17 Küresel Tıp
Uzm. Dr. Mustafa Çelik

Kısım 18 Yaşlanma
Prof. Dr. Korkut Ulucan

Kısım 19 Konsültasyon Tıbbı
Uzm. Dr. Mustafa Çelik

Kısım 20 Yeni Keşifler
Uzm. Dr. Mustafa Çelik

Dr. Ahmet Acar
Avrupa Hospital Hastanesi

Prof. Dr. Arzu Akçay
Acıbadem Üniversitesi Acıbadem Altunizade Hastanesi
Çocuk Hematolojisi ve Onkolojisi Uzmanı

Prof. Dr. Teoman Akçay
Üsküdar Üniversitesi Tıp Fakültesi Çocuk Sağlığı ve Hastalıkları Anabilim Dalı Çocuk Endokrinolojisi Uzmanı

Uzm. Dr. Seçkin Akçay
Ümraniye Eğitim Araştırma Hastanesi Endokrinoloji,
Ümraniye, İstanbul

Uzm. Dr. Ayşegül Akçebe
İstinye Üniversitesi Gaziosmanpaşa Medical Park Hastanesi
Acil Tıp Uzmanı

Uzm. Dr. Nadiye Akdeniz
Adıyaman Eğitim ve Araştırma Hastanesi,Tıbbi Onkoloji
Kliniği

Uzm. Dr. Mustafa Akker
İstinye Üniversitesi Gaziosmanpaşa Medical Park Hastanesi
Dahiliye Uzmanı

Prof. Dr. Osman Aktaş
Atatürk Üniversitesi Tıp Fakültesi Tıbbi Mikrobiyoloji Anabilim Dalı, Erzurum

Prof. Dr. Ayşe Albayrak
Atatürk Üniversitesi Tıp Fakültesi Enfeksiyon Hastalıkları ve Klinik Mikrobiyoloji Anabilim Dalı, Erzurum

Prof. Dr. Ülkü Altoparlak
Atatürk Üniversitesi, Tıp Fakültesi, Tıbbi Mikrobiyoloji
Anabilim Dalı

Dr. Sezen Kılıç Ar
Dicle Üniversitesi Tıp Fakültesi, İç Hastalıkları Bölümü,
Diyarbakır

Dr. Öğr. Üyesi Aysun Aras
Atatürk Üniversitesi Tıp Fakültesi Halk Sağlığı Anabilim Dalı,
Erzurum

Hatice Yaşar Arsu
Cerrahpaşa Tıp Fakültesi Enfeksiyon Hastalıkları ve Klinik
Mikrobiyoloji Anabilim Dalı, Tıbbi Mikrobiyoloji Laboratuvarı

Uzm. Dr. Şenol Aslan
Erzurum Bölge Eğitim Araştırma Hastanesi Acil Tıp Kliniği

Dr. Öğr. Üyesi Beste Tacal Aslan
Marmara Üniversitesi Diş Hekimliği Fakültesi,
Temel Tıp Bilimleri, Tıbbi Biyoloji ve Genetik Bölümü

Uzm. Dr. Murat Aydın
Erzurum Bölge Eğitim ve Araştırma Hastanesi,
Enfeksiyon Hastalıkları ve Klinik Mikrobiyoloji

Uzm. Dr. Nurten Nur Aydın
Erzurum Bölge Eğitim ve Araştırma Hastanesi,
Enfeksiyon Hastalıkları ve Klinik Mikrobiyoloji

Prof. Dr. Mustafa Said Aydoğan
Hasan Kalyoncu Üniversitesi, Gaziantep Medikal Park
Hastanesi Yoğun Bakım Ünitesi, Gaziantep

Prof. Dr. Orhan Ayyıldız
Dicle Üniversitesi Tıp Fakültesi, Hematoloji Bölümü,
Diyarbakır

Uzm. Dr. Sevgi Polat Bağcıer
Dicle Üniversitesi Tıp Fakültesi, Hematoloji Bölümü,
Diyarbakır

Dr. Öğr. Üyesi Mustafa Bayraktar
Atatürk Üniversitesi Tıp Fakültesi Aile Hekimliği Anabilim
Dalı, Erzurum

Uzm. Dr. Meryem Benzer
Yeni Yüzyıl Üniversitesi Gaziosmanpaşa (GOP) Hastanesi
Çocuk Nefrolojisi Uzmanı

Dr. Öğr. Üyesi Murat Bıçakcıoğlu
İnönü Üniversitesi Tıp Fakültesi, Anesteziyoloji ve
Reanimasyon Anabilim Dalı, Yoğun Bakım Bilim Dalı, Malatya

Prof. Dr. Oktay Bilgir
Bozyaka Eğitim ve Araştırma Hastanesi, Hematoloji Bölümü,
İzmir

Uzm. Dr. Şerife Nur Boysan
Ümraniye Eğitim Araştırma Hastanesi Endokrinoloji,
Ümraniye, İstanbul

Uzm. Dr. Nazım Onur Can
Erzurum Şehir Hastanesi Acil Tıp Kliniği

Prof. Dr. Ömer Cevit
İstinye Üniversitesi Gaziosmanpaşa Medical Park Hastanesi
Çocuk Allerji ve İmmünoloji Uzmanı

Uzm. Dr. Fatma Çakmak
Erzurum Eğitim Araştırma Hastanesi Acil Tıp Uzmanı

Dr. Öğr. Üyesi Mehmet Akif Çakmak
Atatürk Üniversitesi Tıp Fakültesi Plastik, Rekonstrüktif ve
Estetik Cerrahi

Dr. Öğr. Üyesi Erkan Çakmak
Fırat Üniversitesi Tıp Fakültesi İç Hastalıkları Ananbilim Dalı,
Elazığ

Uzm. Dr. Mustafa Çelik
Liv Hospital Gaziantep

Uzm. Dr. Ayşe Çetin
İstinye Üniversitesi Gaziosmanpaşa Medical Park Hastanesi Acil Tıp Uzmanı

Uzm. Dr. Sedat Çetin
Diyarbakır Gazi Yaşargil Eğitim Araştırma Hastanesi Endokrinoloji, Diyarbakır

Uzm. Dr. Şükrü Çiftçi
İstinye Üniversitesi Gaziosmanpaşa Medical Park Hastanesi Anestezi Uzmanı

Uzm. Dr. Cemile Aylin Erman Daloğlu
Antalya Eğitim ve Araştırma Hastanesi, Tıbbi Mikrobiyoloji Bölümü

Dr. Öğr. Üyesi Orhan Delice
Erzurum Şehir Hastanesi Acil Tıp Kliniği

Uzm. Dr. Vehbi Demircan
Mardin Eğitim ve Araştırma Hastanesi, Hematoloji Bölümü, Mardin

Uzm. Dr. Selçuk Demircan
İnönü Üniversitesi Tıp Fakültesi, Anesteziyoloji ve Reanimasyon Anabilim Dalı, Yoğun Bakım Bilim Dalı, Malatya

Dr. Mehmet Sıddık Dilek
Dicle Üniversitesi Tıp Fakültesi, İç Hastalıkları Bölümü, Diyarbakır

Uzm. Dr. Gafur Doğdu
İstinye Üniversitesi Gaziosmanpaşa Medical Park Hastanesi Çocuk Sağlığı ve Hastalıkları Uzmanı

Prof. Dr. Mahmut Doğru
Şişli Memorial Hastanesi Çocuk Allerji ve İmmünoloji Uzmanı

Uzm. Dr. Safa Dönmez
Ankara Şehir Hastanesi Acil Tıp Uzmanı

Uzm. Dr. Deccane Düzenci
İnönü Üniversitesi Tıp Fakültesi, Anesteziyoloji ve Reanimasyon Anabilim Dalı, Yoğun Bakım Bilim Dalı, Malatya

Uzm. Dr. Senar Ebinç
Dicle Üniversitesi Tıp Fakültesi Tıbbi Onkoloji Bilim Dalı

Başak Funda Eken
Marmara Üniversitesi, Diş Hekimliği Fakültesi, Temel Tıp Bilimleri bölümü, Tıbbi Biyoloji ve Genetik

Doç. Dr. Mücahit Emet
İstinye Üniversitesi Gaziosmanpaşa Medical Park Hastanesi

Doç. Dr. Yakup Ergün
Batman Eğitim ve Araştırma Hastanesi,Tıbbi Onkoloji Kliniği

Prof. Dr. İbrahim Ertuğrul
İstinye Üniversitesi İç Hastalıkları Anabilim Dalı Gastroenteroloji Bilim Dalı

Uzm. Dr. Dilek Geneş
Dicle Üniversitesi Tıp Fakültesi İç Hastalıkları Anabilim Dalı Endokrinoloji Bilim Dalı, Diyarbakır

Uzm. Dr. Tufan Giray
İstinye Üniversitesi Gaziosmanpaşa Medical Park Hastanesi

Dr. Ümmühan Gökçen
İstinye Üniversitesi Bahçeşehir Liv Hospital Hastanesi

Doç. Dr. Nevzat Gözel
Fırat Üniversitesi Tıp Fakültesi İç Hastalıkları Anabilim Dalı, Genel Dahiliye Bilim Dalı, Elazığ

Doç. Dr. Ali Gürel
Fırat Üniversitesi Tıp Fakültesi, İç Hastalıkları Anabilim Dalı, Nefroloji Bilim Dalı, Elazığ

Dr. Öğr. Üyesi Ersan Gürsoy
Erzincan Binali Yıldırım Üniversitesi Tıp Fakültesi Aile Hekimliği Anabilim Dalı

Dr. Öğr. Üyesi Gaye Hafez
Altınbaş Üniversitesi Eczacılık Fakültesi Farmakoloji Anabilim Dalı Başkanı

Prof. Dr. Abdurrahman Işıkdoğan
Dicle Üniversitesi Tıp Fakültesi Tıbbi Onkoloji Bilim Dalı

Uzm. Dr. Zaur İbrahimov
İstinye Üniversitesi Bahçeşehir Liv Hospital Hastanesi Acil Tıp Uzmanı

Uzm. Dr. Serdar İleri
Dicle Üniversitesi Tıp Fakültesi Tıbbi Onkoloji Bilim Dalı

Prof. Dr. Gürhan Kadıköylü
Özel Kent Hastanesi Kemik İliği Nakil Merkezi, Hematoloji Kliniği, İzmir

Prof. Dr. Tanju Kadir
Marmara Üniversitesi Diş Hekimliği Fakültesi, Diş Hekimliği Temel Tıp Bilimleri Bölüm Başkanı

Uzm. Dr. Ziya Kalkan
Dicle Üniversitesi Tıp Fakültesi Tıbbi Onkoloji Bilim Dalı

Uzm. Dr. Serkan Kalkan
İnönü Üniversitesi Tıp Fakültesi, Anesteziyoloji ve Reanimasyon Anabilim Dalı, Yoğun Bakım Bilim Dalı, Malatya

Uzm. Dr. Ziya Kalkan
Dicle Üniversitesi Tıp Fakültesi İç Hastalıkları Anabilim Dalı Tıbbi Onkoloji Bilim Dalı, Diyarbakır

Uzm. Dr. Tuğba Tezer Kalkan
Diyarbakır Gazi Yaşargil Eğitim Araştırma Hastanesi İç Hastalıkları, Diyarbakır

Prof. Dr. M. Ali Kaplan
Dicle Üniversitesi Tıp Fakültesi Tıbbi Onkoloji Bilim Dalı

Dr. Umut Karadaş
İstinye Üniversitesi Tıp Fakültesi

Aslı Ece Karadavut
İ.Ü. Cerrahpaşa Tıp Fakültesi (İngilizce)

Uzm. Dr. Ayşe Karahasanoğlu
Medipol Üniversitesi Hastanesi Kadın Hastalıkları ve Doğum Uzmanı

Dr. Öğr. Üyesi Abdullah Karakuş
Dicle Üniversitesi Tıp Fakültesi, Hematoloji Bölümü, Diyarbakır

Uzm. Dr. Oğur Karhan
Dicle Üniversitesi Tıp Fakültesi Tıbbi Onkoloji Bilim Dalı

Dr. Öğr. Üyesi İdeal Beraa Yılmaz Kartal
Atatürk Üniversitesi Tıp Fakültesi Aile Hekimliği Anabilim Dalı, Erzurum

Uzm. Dr. Onur Can Kılınç
SBÜ Dışkapı Yıldırım Beyazıt Eğitim ve Araştırma Hastanesi Dahiliye Uzmanı

Doç Dr. Faruk Kılınç
Fırat Üniversitesi Tıp Fakültesi Hastanesi, Endokrinoloji ve Metabolizma Hastalıkları Kliniği, Elazığ

Başasist. Uzm. Dr. Özlem Koca
Antalya Eğitim ve Araştırma Hastanesi, Tıbbi Mikrobiyoloji Bölümü

Uzm. Dr. Zeliha Korkmaz Dişli
İnönü Üniversitesi Tıp Fakültesi, Anesteziyoloji ve Reanimasyon Anabilim Dalı, Yoğun Bakım Bilim Dalı, Malatya

Dr. Damlanur Kucur
Anadolu Sağlık Merkezi Hastanesi, İstanbul

Dr. Cihan Kunt
İstinye Üniversitesi Tıp Fakültesi

Prof. Dr. Mehmet Küçüköner
Dicle Üniversitesi Tıp Fakültesi Tıbbi Onkoloji Bilim Dalı

Dr. Öğr. Üyesi Mehmet Emin Layık
Van Yüzüncü Yıl Üniversitesi Tıp Fakültesi, Tıp Eğitimi ve Bilişimi Anabilim Dalı

Doç. Dr. Fatma Yalçın Musri
Batman Medikalpark Hastanesi,Tıbbi Onkoloji Kliniği

Dr. Ruvejda Mustafa
Özel Rami Hastanesi

Arş. Gör. Mustafa Narin
Atatürk Üniversitesi Tıp Fakültesi

Dr. Öğr. Üyesi Mehmet Akif Nas
Atatürk Üniversitesi Tıp Fakültesi Tıp Eğitimi Anabilim Dalı, Erzurum

Doç. Dr. Tarık Ocak
İstinye Üniversitesi Bahçeşehir Liv Hospital Hastanesi

Doç. Dr. Zeynep Oruç
Dicle Üniversitesi Tıp Fakültesi Tıbbi Onkoloji Bilim Dalı

Uzm. Dr. Hatice Öner
Ümraniye Eğitim Araştırma Hastanesi Endokrinoloji, Ümraniye, İstanbul

Prof. Dr. Ayşe Belin Özer
İnönü Üniversitesi Tıp Fakültesi, Anesteziyoloji ve Reanimasyon Anabilim Dalı, Yoğun Bakım Bilim Dalı, Malatya

Prof. Dr. Zülal Özkurt
Atatürk Üniversitesi Tıp Fakültesi Enfeksiyon Hastalıkları ve Klinik Mikrobiyoloji Anabilim Dalı, Erzurum

Dr. Öğr. Üyesi Adem Öztekin
Esenler Medipol Üniversitesi Hastanesi Göz Hastalıkları

Doç. Dr. Sinem Özyılmaz
İstanbul Aydın Üniversitesi (İAÜ) VM Medical Park Florya Hastanesi Kardiyoloji Uzmanı

Doç. Dr. Emine Parlak
Atatürk Üniversitesi Tıp Fakültesi Enfeksiyon Hastalıkları ve Klinik Mikrobiyoloji Anabilim Dalı, Erzurum

Doç. Dr. Zafer Pekkolay
Dicle Üniversitesi Tıp Fakültesi İç Hastalıkları Anabilim Dalı Endokrinoloji Bilim Dalı, Diyarbakır

Dr. Esra Pirinççi
Dicle Üniversitesi Tıp Fakültesi, İç Hastalıkları Bölümü, Diyarbakır

Uzm. Dr. Ali Sağlık
İstinye Üniversitesi Bahçeşehir Liv Hospital Hastanesi Acil Tıp Uzmanı

Uzm. Dr. Hüsna Saraçoğlu
Dicle Üniversitesi Tıp Fakültesi İç Hastalıkları Anabilim Dalı Endokrinoloji Bilim Dalı, Diyarbakır

Uzm. Dr. Fatih Mehmet Sarı
Medicana Ataşehir Hastanesi

Uzm. Dr. Mehmet Sarıaydın
Adıyaman Üniversitesi Eğitim Araştırma Hastanesi, İç Hastalıkları Kliniği, Adıyaman

Dr. Leyla Sayhan
Dicle Üniversitesi Tıp Fakültesi, İç Hastalıkları Bölümü, Diyarbakır

Dr. Muhammed Emre Sevim
Dicle Üniversitesi Tıp Fakültesi, İç Hastalıkları Bölümü, Diyarbakır

Uzm. Dr. Yasin Sezgin
Dicle Üniversitesi Tıp Fakültesi Tıbbi Onkoloji Bilim Dalı

Dr. Öğr. Üyesi Suat Sincan
Atatürk Üniversitesi Tıp Fakültesi Aile Hekimliği Anabilim Dalı, Erzurum

Dr. Öğr. Üyesi Gülden Sincan
Atatürk Üniversitesi Tıp Fakültesi İç Hastalıkları Anabilim Dalı Hematoloji Bölümü

Uzm. Dr. Hikmet Soylu
Diyarbakır Gazi Yaşargil Eğitim Araştırma Hastanesi Endokrinoloji, Diyarbakır

Uzm. Dr. Kübra Şahin
T.C. Sağlık Bilimleri Üniversitesi, Antalya Eğitim ve Araştırma Hastanesi, İç Hastalıkları Kliniği

Dr. Berivan Şenkaya
Dicle Üniversitesi Tıp Fakültesi, İç Hastalıkları Bölümü, Diyarbakır

Dr. Ayşe Demiralay Şenyurt
Akşehir Özel Park Hayat Hastanesi

Uzm. Dr. Mehmet Şimşek
Diyarbakır Gazi Yaşargil Eğitim Araştırma Hastanesi Endokrinoloji, Diyarbakır

Dr. Öğr. Üyesi Esra Çınar Tanrıverdi
Atatürk Üniversitesi Tıp Fakültesi Tıp Eğitimi Anabilim Dalı, Erzurum

Doç. Dr. Kenan Taştan
Atatürk Üniversitesi Tıp Fakültesi Aile Hekimliği Anabilim Dalı, Erzurum

Araş. Gör. Dr. Türkan Elif Taştan
Atatürk Üniversitesi Tıp Fakültesi Halk Sağlığı Anabilim Dalı, Erzurum

Doç. Dr. Kenan Taştan
Atatürk Üniversitesi Tıp Fakültesi Aile Hekimliği Anabilim Dalı, Erzurum

Prof. Dr. Cüneyt Tetikkurt
İstanbul Üniversitesi-Cerrahpaşa Cerrahpaşa Tıp Fakültesi Göğüs Hastalıkları Anabilim Dalı

Uzm. Dr. Gül Aydın Tığlı
Antalya Eğitim ve Araştırma Hastanesi, Tıbbi Mikrobiyoloji Bölümü

Doç. Dr. Ömercan Topaloğlu
Zonguldak Bülent Ecevit Üniversitesi Tıp Fakültesi İç Hastalıkları Anabilim Dalı Endokrinoloji ve Metabolizma Hastalıkları Bilim Dalı

Prof. Dr. Mazhar Müslüm Tuna
Ümraniye Eğitim Araştırma Hastanesi Endokrinoloji, Ümraniye, İstanbul

Uzm. Dr. Sezai Tunç
Dicle Üniversitesi Tıp Fakültesi Tıbbi Onkoloji Bilim Dalı

Doç. Dr. Kader Uğur
Fırat Üniversitesi Tıp Fakültesi Endokrinoloji ve Metabolizma Hastalıkları Bilim Dalı

Prof. Dr. Korkut Ulucan
Marmara Üniversitesi Diş Hekimliği Fakültesi, Temel Tıp Bilimleri, Tıbbi Biyoloji ve Genetik Bölümü

Dr. Öğr. Üyesi Zuhat Urakçı
Dicle Üniversitesi Tıp Fakültesi Tıbbi Onkoloji Bilim Dalı

Uzm. Dr. Cihan Ural
Hatay Eğitim ve Araştırma Hastanesi, Hematoloji Bölümü

Prof. Dr. Hakan Uslu
Atatürk Üniversitesi Tıp Fakültesi Tıbbi Mikrobiyoloji Anabilim Dalı, Erzurum

Uzm. Dr. Sibel Güçlü Utlu
Erzurum Şehir Hastanesi, Acil Tıp Kliniği

Dr. Lales Yanık
Dicle Üniversitesi Tıp Fakültesi, İç Hastalıkları Bölümü, Diyarbakır

Dr. Öğr. Üyesi Serdar Yaşar
Pendik Medipol Üniversitesi Hastanesi Acil Tıp Uzmanı

Uzm. Dr. Halise Çınar Yavuz
Ümraniye Eğitim Araştırma Hastanesi Endokrinoloji, Ümraniye, İstanbul

Uzm. Dr. Aylin Öztürk Yavuz
Acıbadem Hastanesi Göktürk Tıp Merkezi Nöroloji Uzmanı

Uzm. Dr. Halis Yerlikaya
Diyarbakır Memorial Hastanesi,Tıbbi Onkoloji Kliniği

Uzm. Dr. Şengül Baran Yerlikaya
Dicle Üniversitesi Tıp Fakültesi, Hematoloji Bölümü, Diyarbakır

Özlem Özge Yılmaz
Marmara Üniversitesi, Diş Hekimliği Fakültesi, Temel Tıp Bilimleri, Tıbbi Biyoloji ve Genetik Bölümü

Prof. Dr. Aytaç Yücel
İnönü Üniversitesi Tıp Fakültesi, Anesteziyoloji ve Reanimasyon Anabilim Dalı, Yoğun Bakım Bilim Dalı, Malatya