# THE AMERICAN BOARD OF TOXICOLOGY

## DABT NEWS

Winter 2023



# ABT Annual Mixer Meeting at Society of Toxicology

Monday, March 20, 2023

4:30-6:00 pm

Omni Nashville Hotel Broadway Ballroom E

#### **CERTIFICATION EXAM 2023**

October 12, 2023
Application Deadline:
April 30, 2023

#### **Contact Us:**

American Board of Toxicology, Inc.
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#### **THE DOSE (aka, President's message)**

It is incredibly bittersweet as my service on the Board of Directors comes to an end. As any prospective board member can attest, the phrase "this is a working board" is a mantra during the candidate interview. I am so proud of the work the board has accomplished in the past four years.

After the first computer-based examination was administered in 2021, the ABT Board of Directors reviewed the wealth of data available with the new electronic format. Because the second practice analysis study of toxicology had just been completed and the exam specifications were going to be refined, the Board decided to also commission a psychometric study with the goal determining if a shorter exam with fewer questions would produce the same reliability as the 200-question exam. The results of this study indicated 140 scored questions



would produce essentially similar psychometric properties to 200 scored questions. Thus, beginning in 2022, the exam consists of 140 scored and 20 beta questions for a total of 160 questions administered over 4 hours. Post-analysis of the 2022 exam resulted in statistical results consistent with those in past years. If you are attending SOT, see Abstract #5155 and poster P256 (Thursday AM) for more details on the reliability study and the 2nd Practice Analysis.

In 2022, the board pivoted to renew focus on question writing. A question writing training and workshop was held with all board members during the summer board meeting in July and a second workshop was held in early February, hosted at the home of Executive Director Susie Masten. In addition to having a robust database for the current one-day annual exam, the Board is working toward a long-term goal of building a database large enough to offer the exam on multiple days in a year. Former board members Carol Wood, Elaina Kenyon, and Rob Mitkus generously gave their time and talent to assist with this work, and I want to thank each of them for their continued service to the ABT!



Jessica Graham, Nicole Soucy, Susie Masten, Michelle Hooth, Alex Eapen, John Buchweitz, Rob Mitkus

I encourage all Diplomates to consider serving as an ABT Board member. While the work is hard, the purpose is exceedingly important to our profession. Maintaining the standard of practice, ensuring it remains current with the rapid advances in the field of toxicology, and recognizing those toxicologists who demonstrate competence against those standards are all vitally important. The rewards for this hard work are many; the most significant benefits for me have been the friends I have made and the sheer fun I have had along the way! In looking back at the 134 former board members, the list reads like a 'who's who' of the profession; it is only through the gentle encouragement of former board member Robert Roy that I even considered placing my name into consideration. For those Diplomates reading this and thinking you might want to serve 'someday', please take this as my gentle encouragement to place your name into consideration now!

Finally, I want to thank Executive Director Susie Masten and her assistant Laurie Wood. They are the lifeblood of this organization. I cherish their friendship and will miss having the opportunity to spend one week in July in their company. They make hard work fun!  $\Box\Box$ .

Nicole Soucy President, 2022-23

#### **Outgoing Board Members**

It is time to bid a sad farewell to Jill Ryer-Powder, Michelle Hooth and Nicole Soucy who will complete their ABT Board terms on April 1. It has been a long four years, yet it went by in the blink of an eye! The retiring Board Members have made a significant contribution to the American Board of Toxicology. The remaining Directors on the Board wish to express their appreciation and commend their colleagues for a job well done.



#### Treasurer's Report

The ABT faced significant financial hurdles in 2022, from high inflation resulting in increased costs for goods and services, to a widespread market downturn in both equities and bonds. In response to these challenges, ABT practiced rigorous oversight of its budget. Total revenue for the year was \$352,421 and expenses were \$311,815, resulting in a surplus of \$40,606. Compared to 2021, our revenue and expenses declined 7.4% and 2.4%, respectively. The primary driver for both the lower revenue and expenses was the shorter exam given in 2022 (160 questions in 2022 versus 200 questions in 2021). The 2022 exam had a 4-hour duration rather than the 7-hour duration in 2021. This resulted in lower expenses associated with the computer-based testing centers. As a corollary, ABT passed on these savings to examinees by reducing the examination fee in 2022 by \$75 from \$475 to \$400.



ABT's investment account was not immune to the market downturn in 2022. At the end of the 2022 calendar year, our investment had a negative 17.5% return, breaking a streak of three consecutive years of strong positive returns. Despite the tough year, the investment account was valued at \$679,316, more than twice the annual budgetary expenses for the ABT organization, the target goal for the investment portfolio. Since the inception of the investment account, the portfolio has produced an annual rate of return of 7.96% and has increased in value by \$331,875. Though the markets continue to be volatile in early 2023, the portfolio has responded favorably thus far, increasing in value by little over \$35,000 through the first two months of 2023.

The Board has approved the 2023 ABT budget of \$360,030 in revenue and \$343,409 in expenses, with an anticipated surplus of \$16,621. The budgeted revenue and expenses both are slight decreases from 2022, with declines of 1.8% and 3.2%, respectively. A lot of challenges have been faced and lessons learned over the last several years in terms of the annual ABT budget given the COVID-19 pandemic, particularly regarding the cancelled ABT exam in 2020, as well as returning the ABT exam in 2021, but in a new, electronic format. The 2023 budget is anticipating far less dramatic changes in either expenses or revenue swings as experienced in recent budgetary history, thus the relatively "flat" budget relative to 2022. Despite all the budgetary challenges in our recent history, ABT has a robust history of keeping its expenses below revenue. The Board has high confidence in our 2023 budget but will diligently monitor our financial situation over the year and pivot if necessary.

As I wrap up my second year as the ABT Treasurer, I want to extend my gratitude to Masten Management, Lynx Investment Advisory, LLC, and the ABT Board in providing the support and guidance needed in supporting me as Treasurer, and I look forward to my third, and sadly final year, as ABT Treasurer.

Respectively submitted,

Nathan Pechacek Treasurer

#### **Digital Badges: Dos and Don'ts**

Last year, ABT began the use of digital badging. Links to digital badges can be shared on LinkedIn as well as in email signatures. Note that displaying the ABT-issued digital badge with its hyperlink is the only acceptable way to use the ABT logo, which is trademarked. Anyone clicking on it is taken to the actual badge which verifies Diplomate status and the dates of the current certification period. It is a copyright infringement to simply copy and paste the picture as shown to the right without the hyperlink.

If you have questions, please contact the ABT office. Note that paper certificates for new Diplomates and recertification stickers are no longer being sent. Badge dates will automatically update at the beginning of a new cycle if recertification is successfully completed. However, certificates can be printed from the digital badge.



#### **Recertification Reminder**

#### Classes of 1984/89/1994/1999/2004/2009/2014/2019

Diplomates in the above classes begin the recertification process this year. The schedule for this year is as follows:

Letters mailed, Email notice sent

Completed application and fee due

Literature Review Info Emailed

Literature Review Answers Due

Committee Review

Results sent to Diplomates

January 27, 2023

March 31, 2023\*

May 8, 2023

July 10, 2023

Summer 2023

Fall 2023

Corrected Deficiencies Due June 1, 2024

Recertification Letters Sent December 1, 2024

#### **Recertification Handbook and Tips**

Each year the Recertification Committee reviews hundreds of applications for recertification. Each year more than 20% of applications received are found deficient! The majority of deficient applications would pass if Diplomates had reviewed the Recertification Handbook and read and followed the online instructions when entering their information into their online account. Being found deficient increases the chances of losing one's certification due to forgetting to update online accounts with corrections by the deadline. In addition to the Recertification Handbook, the Board has prepared a list of FAQs addressing some of the most common questions about recertification. Please note the FAQs do not substitute for the full Handbook. They simply provide greater clarification and detail about areas that the ABT office receives the most questions. Both the Handbook and FAQs are on the Diplomate portion of the website.

#### **Retired Status Refresher**

The ABT formerly had a "Retired" status, but upon legal advice, it was eliminated by the Board in 2010. ABT is not a membership organization but rather a credentialing body with a responsibility to the public to ensure that any toxicologist using the DABT credential has met the requirements for both certification and recertification. If a Diplomate does not recertify but still practices as a toxicologist using the DABT credential, it creates a risk of confusion and potential liability for ABT. Because it is impossible to determine if a person claiming "Retired Status" is still practicing, the Board stopped offering the designation. Please note that any former Diplomate may indicate that s/he was certified by designating the appropriate years of certification, as in the example below:

John Doe, DABT 1980-2015

#### **In Memoriam**

We are sad to convey the loss of the following Diplomates and former Diplomates.

Zoltan Gregus, Class of 1986 Florence Kinoshita, Class of 1981 Frank Mastrocco, Class of 1993 Harihara Mehendale, Class of 1980 Robert Staab, Class of 1980

<sup>\*</sup>After March 31, 2023, a late penalty of \$150 is assessed. ABT is not accountable for any lost or undelivered mail.

#### **Welcome New Board Members**

The following Diplomates were elected to the Board of Directors and began four-year terms on April 1, 2022:







Jessica Graham



Kimberly Norman

#### Diplomates Give Back: Guest Column ToxMSDT

The Toxicology Mentoring and Skills Development Training Program (ToxMSDT) is a year-long toxicology training and mentoring program targeting underrepresented undergraduate STEM students. Administered by the Department of Molecular Biosciences, School of Veterinary Medicine, UC Davis, this NIH funded program is run by a consortium of institutions including the Society of toxicology, Tuskegee University, Iowa State University, The Ohio State University, and Michigan State University. The goal of the program is to attract diverse undergraduate students from around the United States to pursue careers in toxicology and other areas of NIH interest. Toxicology is not offered as a major at most undergraduate institutions in the US and so this program is filling that gap.

This unique program is run mostly virtually 24/7 365 days a year through the ToxMSDT website. Successful applicants are paired 1:1 with a toxicologist mentor in an area of potential career interest. Mentors for the program are volunteers and most of them are ABT Diplomates. Mentors are selected to represent the diversity of the toxicology profession including industry, government, academia, and consultants. Each year we need 25 mentors who meet remotely with mentees throughout the year. In-person activities include the inaugural workshop at the University of California Davis, a visit by the mentee at the mentor's work site, the SOT Annual Meeting, and the celebration of program successes at the capstone event at Tuskegee University in Alabama. Mentees also review online learning modules and case studies to gain a foundation in toxicology.

Mentors are a key part of the program's success because we want students to be exposed to professionals who are solving toxicological problems impacting our society daily. Our students are exposed to current and relevant skillsets and technology. Our mentor recruitment campaign is ongoing and we encourage you to volunteer through our website <a href="Toxicology Mentoring">Toxicology Mentoring and Skills Development Training Program</a>. Benefits of serving as a mentor include career advancement through leadership skill development, networking opportunities with other mentors and professions in toxicology, increased visibility and recognition within the mentor's place of work, personal satisfaction from giving back to the next generation of toxicologists and supporting the NIH to diversify the biomedical workforce which is of benefit to the country.

Submitted by



# ToxMSDT Outing Left, front to back: Nathan Pechacek, Nader Abdalla, Nicole Soucy, Alex Eapen. Right, front to back: Andy Kiorpes, Melissa Rosas, Robert Roy, Tasnia Hossain)

#### **Dear Auntie Dote**

Dear Auntie Dote:

I would like to answer the Literature Review questions from the past few years for CE credit. Can you send the articles and questions to me?

**Deficient Diplomate** 

Dear Deficient Diplomate:

Unfortunately, articles can only be answered for CE credit in the year they are released. For example, to earn CE credit for 2022 using Literature Review articles, Diplomates must request them from the ABT office after they are released in May and submit their answers by December 31, 2022. Note that no credit is given for answering articles in the year they are required during the recertification application process.

# 2022 Certification Examination Changes and Recap

With the completion of the second practice analysis study of toxicology in 2021, changes were made to the certification examination beginning with 2022. First, the examination specifications were changed according to the new practice analysis. In addition, after the first electronic administration of the exam in 2021, the ABT Board realized the difficulty candidates had scheduling the examination as testing centers had trouble accommodating 2-three hour blocks with a break in between on a single day. After reviewing the newly available data surrounding the time taken by candidates on each question, the Board engaged ACT Pro-Exam to conduct a reliability study to investigate the impact of reducing the test length of the ABT exam. Reducing the length would allow for many benefits such as reduced seat time at testing centers, lowered examination fees for candidates and a less burdensome the item development process. The study results showed that an examination of 140 scored items will produce essentially similar psychometric properties to those produced by the current 200-item DABT exam. The study and review of data from the 2021 examination also supported a testing time frame of three to four hours for 150-170 total items, allowing time to add "pre-test" items. These are questions that are not scored, but performance statistics are gathered to gauge appropriateness for use on future examinations. With this information, the 2022 certification examination was 4 hours in length with 140 scored/20 unscored items. The Board would like to ensure Diplomates that the shortened examination decision was not made lightly. Care was taken to follow the steps necessary to ensure the ABT exam will continue to be a globally recognized credential in toxicology representative of competency and commitment to human health and environmental sciences.

In keeping with best practices in the credentialing industry, the Board also contracted with Pro-Exam to conduct a new <u>criterion referenced Standard Setting exercise</u> after the 2022 examination changes. This process is used to set the passing score and to ensure passing the examination depends on the amount of knowledge displayed, not on the population of candidates taking the exam. After the examination was graded based on the results of the standard setting, the 72% rate of candidates passing was consistent with all administrations since the exam format changed in 2017. Other exam statistics such as difficulty were also consistent.

If you are attending SOT, see Abstract #5155 and poster P256 (Thursday AM) for more details on the reliability study and the 2nd Practice Analysis. The Board also is working on a manuscript with more details about these studies and hopes it will be published in 2023.

One hundred eighty-seven candidates passed the 2022 examination. In addition, the computer-based administration at testing centers went much more smoothly than in 2021. The Board extends congratulations to all 2022 new Diplomates of the American Board of Toxicology®!

# **DIPLOMATES OF 2022**

Zabiullah AJ	Isabel Estevez	Jacob Larson
Oluwadamilare Adebambo	Weili Fan	Wilson Lau
Famke Aeffner	Jie Fang	Vivek Lawana
Israr Ahmad	Sarah Farahmand	Nicole Lay
Badr Alhemayyed	Natalie Fowlkes	Guillaume Letellier
Roxanne Andaya	Lindsay Frankart	Hui Li
Caroline Andrews	Johnathan Furr	Xia Li
Stanley Aniagu	Keyur Gada	Sarah Lister
Nkem Azu	Gopi Gadupudi	Ruschelle Love
Keegan Baldauf	Joshua Gamse	Heather Lynch
Ifeoluwa Bamgbose	Harriet Gaskell	Alastair Mak
Suren Bandara	Appalaraju Gorle	Alexandra Markle
Maria Bastaki	Anil Gothi	Melisa Masuda
Sarah Benjamin	Jennifer Gray	Ashley McCord
Angela Betancourt	Jessica Greco	Dessi McEntee
Javed Bhalli	Sanjeev Gumber	Veenu Minhas
Sanjay Bharti	Volkan Gurel	David Minick
Bharat Bhushan	Megan Hahn	Ananya Mitra
Mallikarjun Bidarimath	Lydia Haile	Kazuhisa Miyakawa
Heather Bolstad	Josa Hanzlik	Keith Morris-Schaffer
Prachi Borude	Jennifer Harris	Brian Mulhern
Preethne Böser	Silvia Hernandez	Naresh Kumar Nagula
Benjamin Brooks	Lindsay Holden	Kevin Nash
Dennis Carty	Jianying Huang	Andrew Nelson
Yuchi Chang	Madelyn Huang	Christina Neske
Maresha Charles	Mary Iheanacho	Jalissa Nguyen
Satish Chava	Anita Iskandar	Brian Nielsen
Chan Chen	Joseph Jilek	Jung-Ho Noh
Hao Chen	Agata Jurczyk	Leah Norona
Jikuai Chen	Shekhar Kadam	Hesbon Nyambego
Shuijuan Chen	Sushant Kamath	Prashant Pansare
Yichang Chen	Surya Karki	Jane Parkin Kullman
Colin Choi	Saritha Kathe	Matthew Perkins
Bonnie Coffa	Michael Kerins	Josee Perron
Evan Comeaux	Heejaung Kim	Jonathan Petali
Elizabeth Cripe	Carolyn Klocke	Ashwini Phadnis-Moghe
Denisa Cupi	Lisa Koodie	Anthony Pinçon
Tyna Dao	Daniel Kougias	Mukeshkumar Poshiya
lan Delaere	Michael Kovochich	Kayla Preece
Corinne Devaux	Vikas Kulshreshtha	Wen Qu
Aparajita Dutta	Pankaj Kumar	Michael Quinn
Moumita Dutta	Diana Lac	Manish Rachchh
Elijah Edmondson	Alejandro Larios Mora	Rowena Raeburn

### **DIPLOMATES OF 2022** (continued)

Vanessa Ragaglia	Jesse Strong	Teresa Wegesser
Tadimeti Rao	Leah Swanson	Zhengxi Wei
V V S Vamsi Reddy T	John Szilagyi	Brittany Wilt
Thomas Reich	Serkalem Tadesse-Telila	Hanna Witwicka
John Reichard	Sanjay Talreja	Tongde Wu
Chad Reiter	Susan Tantawi	Haiyan Xu
Madhan Rose	Amit Tiwari	Miaofei Xu
Suresh Kumar RS	Hsiang-Wen Tseng	Xiang Xu
Nikaeta Sadekar	Kelly Tuttle	Piyush Yadav
Daisuke Sasaki	Alexander Ufelle	Hong Yan
Shrikant Satale	Deepak Ujawane	Tsuyoshi Yoshikawa
Odile Sellier	Reginald Valdez	Dahea You
Kenrick Semple	Izabel Villela	Mengyun Zhang
Sunjay Sethi	Terra Vincent	Mo Zhang
Erik Shao	Phillip Wages	Xu Zhang
Chunlin Shen	Ian Wallace	Changqing Zhou
Ashley Smit	Erman Wang	Yuting Zhou
Leah Smith	Lifeng Wang	Jie Zhu
Gregory Sondag	Xiaoxiao Wang	
Anup Srivastava	Donald Ward	

#### **Recertified Diplomates**

Congratulations to Diplomates from the classes of 1981, 1986, 1991, 1996, 2001, 2006, 2011 and 2016 who completed the recertification process and are now certified from January 1, 2022 – December 31, 2026.

Class of 1982				
Linda S. Birnbaum	William M. Kluwe	Toni F. Miller		
	Class of 1987			
Matthew S. Bogdanffy	Nabil S. Hatoum	Virginia C Moser		
William J. Brock	J. Daniel Heck	Thomas G. Osimitz		
Robert W. Coppock	Peter Leung			
Marion J. Fedoruk	David A. Morgott			
	Class of 1992			
Edward Chow	Mark A. Maddaloni	Bruce Trela		
Mary Ellen Cosenza	Milton V. Marshall	Joyce S. Tsuji		
Elizabeth Cozzi	Ellen M. Mihaich	Kendall B. Wallace		
J.E. Dillberger	David K.B. Monteith	Christopher P. Weis		
Jeffrey H. Driver	Linda S. Roberts	Roger N. Wixtrom		
Mary Beth Genter	Kathleen Rodgers	Zbigniew W. Wojcinski		
Kenneth L. Hastings	Marilyn H. Silva	Grushenka Wolfgang		
Brian J. Hughes	Andrew J. Sonderfan	Kathryn A. Wurzel		
Janis E. Hulla	Robert G. Sussman	Jeffrey J. Yourick		

Recertified	<b>Diplomates</b>
HGGGI UHGU	nihiniliare

#### Class of 1997

Class of 1991			
Donya Bagheri	Robert S. DeWoskin	Jens Thing Mortensen	
Donald L. Bjerke	Jeffrey S. Duffy	Vincent A. Murphy	
Diann Blanset	Scott D. Dwyer	Adriana R. Oller	
Peter Brinck	Russell J. Eyre	Mary E. Richardson	
Leigh Ann Burns Naas	Lucy H. Fraiser	Clifford W. Sachs	
Daniel J. Caldwell	Thomas R. Gelzleichter	Tracey L. Spriggs	
Paul J. Ciaccio	Kanwar N.M. Khan	Ross M. Wilson	
Paul Damian	lan C. Lamb	Carol S. Wood	
Jonathan M. Daniels	Phyllis B. Malpas	II Je Yu	
Bryan Delaney	William B. Mattes		
Class of 2002			
Krishna P. Allamneni	Mark Steven Johnson	Meredith S. Rocca	
Drew A. Badger	Petra S. Kern	Tina S. Rogers	
Nancy Beck	Mark P. Korchinski	Laurie E. Roszell	
Peter J. Boogaard	Sven Kronenberg	J. Craig Rowlands	
David Brandwene	Robert W. Lange	Klaus Schneider	
Grantley D. Charles	Ranulfo Lemus-Olalde	Franz Schuler	
Larry L. Cook	M. Sue Marty	Katrin Schutte	
Raviprakash R. Dugyala	Thomas McHugh	Tessa L. Serex	
Ali Said Faqi	Barry S. McIntyre	Alan H. Stokes	
Ellen C. Faria	Kathleen E. Meyer-Tamaki	Jessica E. Sutherland	
Lavorgie Finch	James R. Myer	Justin G. Teeguarden	
Pamela R. Gentry	Mark R. Osier	Laura Stewart Van Winkle	
Lois A. Haighton	Gerardo N. Pangilinan	Esther H. Vock	
Chunmei Ji	George Pugh, Jr.	Jayant K. Vodela	
Yi Jin	Patricia Ann Richter		

	Class of 2007	
Diana Joyce Auyeung-Kim	Wenyue Hu	Toufan Parman
Sharada Balakrishnan	Yo-Chan Jeong	Damani K. Parran
Norman James Barlow	Rafaat Khalil	Rudranath Persaud
Scott A. Barros	Choong-Yong Kim	Ramesh N. Reddy
Julie Boisclair	James H. Kim	Paul G. Reinhart
Tage C.G. Carlson	Corwin F. Kostrub	Melissa C. Rhodes
Warren M. Casey	Katja Kotlenga	Elizabeth Sherman Roberts
Brian Chanas	Kathleen L. Krenzer	Amy L. Roe
Mingli Chen	Yefan W Liang	Richard C. Seals
Tracy Chen	Ling Liu	Manu M. Sebastian
Matthew Cowlen	Zijing Lu	Shawn D. Seidel
Ruth Danzeisen	Amy K. Madl	Barney R. Sparrow
Babette de Boer	Irina Meadows	Christopher W. Stewart
Aimen Khader Farraj	Joseph Milano, Jr.	Ting Su
Xiao Feng	Lawrence M. Milchak	Mukesh Summan
John R. Fowle III	Gary D. Minsavage	Eugenia H. Theophilus
Bernard K. Gadagbui	Ryan E. Morgan	Stephane Thibault
Jiang Hu	Yasuo Mori	Anu Vaidyanathan

# **Recertified Diplomates**

	Class of 2007	
Suryanarayana V. Vulimiri	Amy Lavin Williams	Mihi Yang
Nigel J. Walker	Patrick S. Wong	Yi Yang
Rebecca E. Watson	Jianxun (Jack) Xie	
Kevin Welch	Jun Yanase	
	Class of 2007	
Lauren Aleksunes	Matthew C. Haas	Wei Niu
Janet Anderson	Jill Harvilchuck	J. Todd Painter
Paulina Andre	Tracy A. Henriques	Malar Pannirselvam
Shoji Asakura	Jedd Hillegass	Timothy Patterson
Pakwai Au	Carole Hirn	Dewayne Peterson
Wafaa A. Ayad	Matthew Holdren	Valerie Politano
Sairam Bellum	Jonathon Holt	Maryam Rafie-Kolpin
Amy Benson	Hiromi Hosako	Elizabeth R. Rayburn
Nelhs Betancourt	Liangbiao George Hu	Scott Reisman
Jaiprakash Bhelonde	Santanu Jana	Denise Marie Roesh
Sanjay Kantrao Bokan	Harri Jarvelainen	Daniella Ross
Alessandro Brigo	Robert A. Jolly	Thomas Ruecker
Ahna Brutlag	Jayachandra K.C.	G. Sacravarty
Renato Cardoso	Lakshmisha K.V.	Mark Joseph Seaton
Clara Y.Y. Chan	Joahnna Keigwin	Damir Simic
Saurabh Chandra	Natalie Keirstead	Flemming Simonsen
Xinrong Chen	Daniel Kemp	Michael J. Skov
Chen-En Cheng	Rory Kern	Nicole Soucy
Lisa Corey	Rie Kikkawa	In Ok Surh
Laine Cowan	Andrea Seungsun Kim	Bola Taiwo
Justine Cunningham	Gary Klaich	Yunan Tang
Irina Dahms	Jeffrey A. Klein	Matthew Taylor
Xiaoling Dai	Tirukalikundram Kumaravel	Oliver C. Turner
Joseph Dever	Marc Lafleur	Vimala Vemireddi
Wojciech Dworakowski	Timothy Langston	Caren Villano
Karen Elsass	Justine A. Lee	Audrey Wagenaar
Neeraja Erraguntla	Huaina Li	Bradley Wahle
Madeline Fort	Xiaoxia Li	Jason Ŵalraven
William Frez	Pallavi B. Limaye	Wendy Wang
Tamio Fukushima	Fujun Liu	Thomas Weiser
Bjarte Furnes	Tara Lyons-Darden	Raymond Yeager
Kendra F. Goff	Senthilkumar Mariappan	Zhengyu Yin
Gopakumar Gopalakrishnan	Nadia Moore	Hany Youssef
Arun Govindarajan	Sydney Mukaratirwa	Lu Yu
Olga Grabovska	Claire Neilan	Doris Zane

# **Recertified Diplomates**

Class of 2017		
Timothy Ackerson	Nora Jaegemann-Gnadt	Chandrakant Patel
Shahnaz Akhtar	Sridhar Jaligama	Daniel Pena
Adams Amantana	David Johnson	Shu Chun Peng
Bradford Bagley	Robert Johnson	Martin Phillips
Brittany Baisch	Tom Jonaitis	Jing Pope
Stephanie Barbeau	Kimon Kanelakis	John Prins
Mallikarjuna Basavarajappa	Ashish Kapoor	Vincent Ramirez
Joel Baumgart	Manjunatha K. Nanjappa	Eric Rasmuson
Phillip Bellion	Hye jin Kim	Iona Raymond
Shawn Berens	Lee Koetzner	Emily Reinke
Stephanie Born	Martin Kohan	Brandy Riffle
Ewa Budzynski	Andrey Korchevskiy	John Ross
Gina Cantone	Ramesh Kovi	Kristen Ryan
Christopher Carosino	Christopher Kuhlman	Natalia Ryan
Binoj Chandrasekharan Nair	Ashutosh Kumar	lqbal Sayeed
Ming-Wei Chao	John Lange	Leah Schutt
Hemantkumar Chavan	Eric Leishman	Hua Shen
Chuan Chen	Marie Lemper	Yi Shuai
Lily Cheng	Emily Lent	John Sinclair
Yong Joo Chung	Shibin Li	Arya Sobhakumari
Jamie DeWitt	Zhoumeng Lin	Pinakin Soni
Bettina Donato-Weinstein	June Liu	Kai Sun
Beth Dray	Amarjit Luniwal	David Szabo
Jacquelyn Dwyer	Jason Magby	Robert Tavcar
Katharine Engler	Michael Marino	Claudia Thaete
Charlotte Flint	Andrea Mason	Shaji Theodore
Sabine Francke	Ann-Marie Matei	Julie Tripp
Imane Garcia	Tanya McDonnell	Brooke Tvermoes
Javier Gonzalez	Pauline McEwan	Okechukwu Ukairo
Tracy Greene	Lauren Mihalcik	Vijayabalaji Venkatesan
Jenna Guynn	Adele Miller	Neelima Verma
Tarah Hagen	Lutfiya Miller	Chwen-Ting Wang
Wesley Hamilton	Kensuke Mizuyoshi	Nigel Waters
Bethany Hannas	Caitlin Murphy	James Weaver
Tod Harper	Wolfgang Muster	Edward Williams
Richard Haworth	Ziad Naufal	Scott Williams
Kaiyu He	Haley Neff-LaFord	Francis Wolenski
Sheila Healy	Benjamin Newcomer	Wenbo Xin
Kathleen Heinz-Taheny	Robert Nocco	Zhongyu Yan
William Hodnick	Edmund O'Brien	Kejun You
Miaomiao Hu	April O'Connell	Jinqiu Zhu
Ying-Hui Huang	John O'Connor	Tingting Zhu
John Hutchinson	Erik Pacyniak	ringung zitu
Ronald Irwin	Kiran Palyada	
NUHAIU II WIII	Mian Faiyada	<u> </u>