

JULY 2024

# DR. MICHAEL KLEIN THRIVES IN HIS SECOND CAREER



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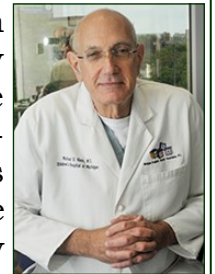
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*Paige Aiello*  
*Molly Belisle*

Dr. Michael Klein is a native Midwesterner who began his college studies at Case Western Reserve in the city of his birth. He then left the Midwest for a short time at the University of Denver and later went to the University of Chicago where he received his Bachelor of Arts degree in 1967. Thinking he might be a historian, he spent one year at Princeton studying Medieval history but then decided to become a physician and returned to Case Western to get his medical degree which he received in 1971. He interned at the University of Washington in Seattle and then moved to the east coast where he did his surgical training within the Harvard system. After finishing at Harvard, he did his pediatric surgical Fellowship at the Children's Hospital of Michigan under the tutelage of the famous Dr. Clifford Benson and Dr. Jack Hertzler from 1977 thru 1979. He spent one year at the University of Michigan on the pediatric surgical faculty working at the Mott Center in Ann Arbor but then was convinced to return to Detroit where he joined the faculty at the Children's Hospital of Michigan and the Wayne State University. He rapidly advanced through the ranks and became a full professor of pediatric surgery in 1987 and then became the Chairman of the Department of Surgery in 2001. His cognitive and technical skills were recognized throughout Michigan, and he became a member of the staff at most of the southeast Michigan hospitals that dealt with pediatric surgery and also at the University of Toledo hospital.



Dr. Michael Klein

From an administrative vantage point, Dr. Klein was involved in many of the hospital committees, including the CHM Board of Trustees. He belonged to all of the local and national organizations that deal with pediatric surgery.

He has had tremendous scholarly activity and has directed many research projects and has been well-funded for his creative research. He has published over 200 peer-reviewed articles, over 25 chapters,

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## DR. MICHAEL KLEIN THRIVES IN HIS SECOND CAREER, CONT.....

and over 25 case reports. His over 100 presentations have been local, regional, national, and international.

Dr. Klein reports that he performed his last operation for pay in 2017 when he decided to retire. Obviously, retirement was not in the cards for Dr. Klein, and he became actively involved in “Doctors Without Borders” and has been involved in missionary work in Kenya and Liberia on many occasions. His last operation was in Kenya in 2019.



Dr. Michael Klein and his bride, Mrs. Tina Klein

Dr. Klein is retired in Cassopolis, Michigan with his bride of many years duration, Tina. He reports that his arthritis has limited his long treks but has not had any negative effect on his creative thinking. Currently, Dr. Klein has returned to his classical and Medieval history from his younger years. His goals and his so-called retirement include the translation of the poetry of St. Peter Damian who was a monk approximately 1,200 years ago and was actively involved in trying to reform the Roman church at a time when there was great conflict between those who wanted to enhance their riches and those who identified that the purpose of the church was to guide people into doing good, which included looking after those with special needs. Dr. Klein has created a booklet, “Peter Damian,” which is an introduction to his poetry. During these years, there was a tremendous struggle between leading church officials and secular rulers which, as would be expected, often dealt with financial matters. Dr. Klein also wishes to translate into readable English the works of the great Cicero who was also a political reformer and is famous for the four Catilinarian orations given to the Romans around 63 B.C. The Roman senator, Catiline, was one of the leaders in a plot designed to overthrow the republic. This conflict persisted for a number of years and led to Julius Caesar returning from Gaul in 49 B.C. to defeat his opponents and become the Caesar from 49 B.C. until his assassination in 44 B.C. The reforms led by Cicero led the future political leaders in Rome to help establish the Roman Empire. The editor has fond memories of the Catilinian orations when, in high school, he translated one phrase, “God helps those who help themselves,” and the good Brother teaching the class did not hear the “s” in the verb of that sentence and complimented the editor for doing a good translation. This also reminded the editor of the dumb thing that he did in high school when he took third-year Latin with Cicero and fourth-year Latin with Virgil instead of typing and now only types 14 words a minute! Dr. Klein wants to make the Cicero writings translated into English without the need for “footnotes.” He has special admiration for Cicero’s essay, “On Old Age.” Dr. Klein obviously believes that a good surgical mind should not go to waste after leaving the operating room.



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## The Prom. . . . Resident Graduation



*The graduation ceremony for the 2024 residents was held at The Colony Club in Detroit on Thursday, 6/13/24. The function began with a welcome reception where everyone enjoyed their favorite beverage and had the opportunity to talk with colleagues from other divisions. The official ceremony began with the welcome provided by our Chairman, Dr. Donald Weaver, who made appropriate introductions and provided a heartfelt wish that all of the graduating residents have a successful career.*

*Each of the program directors then provided an introduction for their residents. Dr. John Webber introduced Dr. Alyssa Stroud who is completing the Minimally Invasive Surgery Fellowship; Dr. Scott Langenburg introduced Dr. Christopher Marengo who is completing the Pediatric Surgical Fellowship; and Dr. Lydia Donoghue introduced Dr. Hollis Hutchings who is completing the Pediatric Surgical Critical Care Fellowship.*

*Dr. Steven Tennenberg introduced Dr. Kelly Zhang and Dr. Amanda Johnson who are completing the Surgical Critical Care Fellowship. Dr. Yeogeniy Rits introduced Dr. Dominic Suma and Dr. Sidra Bhuller who are completing the Vascular Surgery Fellowship.*

*Dr. David Edelman, the General Surgery Program Director, introduced the graduating general surgical residents. These included Dr. Paige Aiello, Dr. Molly Belisle, Dr. Puneet Bhatti, Dr. Anastasya Chuchulo, Dr. Felix Shun, and Dr. Jock Thacker.*

*The faculty members presented a toast to the graduating residents and Fellows, followed by a toast from the graduating residents and Fellows to the faculty. Each year, the residents identify a specific faculty member who has been helpful as a role model during their training. This year's role model is Dr. Sol Hee Lee who teaches the residents General Surgery and Minimally Invasive Surgery.*

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# The Prom . . . . Resident Graduation



(Left to right) Margaret Semlow (aunt), Christine Stienbrecher (cousin), Jake Stienbrecher (cousin), Jaime Belisle (sister), Ann Wilson (mother-in-law-to-be), Dr. Molly Belisle (WSUGS 2024), Nick Whalen (fiancé), Linda Belisle (mom), Steve Belisle (dad), and front Liam Stienbrecher (cousin)



(Left to right) Vinnie Bhatti (brother) and his wife, Marilyn Bhatti, Kami Bhatti (dad), Beena Bhatt (mom), Dr. Puneet Bhatti (WSUGS 2024), Bharti Patel (mother-in-law), Nimesh Patel (father-in-law), Henna Patel (Dr. Bhatti's bride), Mohinder Bhatti (uncle), and Marie Bhatti (aunt)



(Left to right) Trudy (grandmother), Patricia (aunt of Dr. Tobon), Dr. Miguel Tobon (WSUGS 2020), Dr. Paige Aiello (WSUGS 2024), holding their son, George Tobon, June Aiello (mom), Mark Aiello (dad), Taylor White (sister), and Logon White (brother-in-law)



Michael Attala (father-in-law), Noelle Attala (sister-in-law), Dr. Anastasya Chuchulo, her husband, Jeff Attala, and her mother-in-law, Joan Attala



(Left to right) Lucius Rosen, Sandy Rosen, Dr. Ryan Rosen (fiancé), Dr. Alyssa Stroud, Diana Stroud (mom), and Jeff Stroud (dad)

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# The Prom. . . . Resident Graduation



(Back row – left to right) John Getzam (father-in-law-to-be); Ann Karadjoff (mom), Terri Karadjoff (aunt), Margie Karadjoff (aunt), Jeri Witkowski (grandmother), Peter Karadjoff (dad), Ted Getzam (fiance). (Front row – left to right) Dr. Alison Karadjoff (WSUGS 2024), Emily Jarrett (friend, and Katie Karadjoff (sister)



Lori McParlane, Michelle, Dr. Yevgeniy Rits, Dr. Felix Shun (WSUGS 2024), Dr. Sol Hee Lee, and Leanne Crandall (NP)



(Left to right) Dr. Chris Marengo (Pediatric Surgery 2024), his bride, Megan Marengo, Dr. Lydia Donoghue (WSUGS 2008), Dr. Scott Langenburg, Dr. Hollis Hutchings (Pediatric Surgical Critical Care Fellow 2024), and her husband, John Hutchings.



Dr. Heather Dolman (WSU/GS 2000/06) (left) and dr. Lydia Donoghue (WSUGS 2008) (right)



(Left to right) John D'Agostino, Michael D'Agostino (brother of Julie D'Agostino), Julia D'Agostino (friend), Dr. Jock Thacker (WSUGS 2024), Jamie Thacker (mom), Terri Hibbard (aunt, and Anne Wallace (Godmother)



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*The Prom. . . . Resident Graduation*



(Left to right) Dr Andrew Isaacson (WSUGS 2017); Dr Donald Weaver (WSUGS 1979); Roozbeh Mansour (WSUGS 2015); Patrick McGee (husband of Dr McGee); Dr Jessica McGee (WSUGS 2017); Dr Michael White (WSU/GS 1990/97); and Dr John Webber (WSU/GS 1992/99)



Dana Cooley and her husband, Marty Cooley



Janet Damm and her husband Ed Damm



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# SURGICAL GRAND ROUNDS

## MY MOST MEMORABLE CASE

The **Surgical Grand Rounds on 6/4/2024** was presented by Dr. Molly Belisle (WSUGS 2024) and was entitled “The Past, Present, and Future of Wellness in surgery.” Dr. Belisle presented many items related to residency training. She began by describing a report that came out many years ago that there were 98,000 deaths in one year due to medical errors. This part of her talk was opened with the statement, “To err is human.” This report created a huge stigma in the field of medicine and described the ACGME focus on resident work hours in order to identify the relationship between resident fatigue and medical errors. The residency program concept was begun by Sir William Osler at Hopkins in 1889, and the American Medical Association in 1910 approved residency programs in both Surgery and Medicine. The Residency Review Committee (RRC) was established in 1950 for surgical and medical residencies, and the Liaison Committee for Graduate Medical Education (LCGME) was established in 1972. The concept of duty hours was introduced in 1981, and the idea that excess work without sleep was associated with increased medical errors. Similar findings were identified in the military and in various colleges. The educational emphasis was that there should be a balance between service and education.

The episode of Mrs. Libby Zian at a New York hospital was described in which there was a medication error made in the early morning hours which was attributed to residency fatigue. This led to a Grand July evaluation which led to reforms, one of which was the introduction of the 80-hour work week in 1986. New York was the first state in 1989 to regulate working hours, and their first assessment of this regulation identified that there was about a 60% compliance rate with the 80-hour week. In 1987, the ACGME developed a task force which looked at education, resident work hours, one day off every week, and back-up availability when one is overly stretched. They also looked at the importance of supervision and emphasized that the reduction in resident hours needs to be covered by the various insurance companies.

Greater emphasis was placed on duty hours and violations in the late 19<sup>th</sup> century, and by the beginning of the 21<sup>st</sup> century, federal regulations were established. The American College of Surgeons emphasized the importance between education and safety and established that there has to be a certain number of hours between shifts in order for the resident to be well rested for the next shift. There was a prospective randomized controlled trial published by the New England Journal of Medicine in 2004; this study emphasized that error rates were decreased by 39%, and medical error were decreased by 20% when the implementation of the 80-hour work week and the other guidelines was followed. The number of calls went from every third day to every fourth day. They demonstrated that the decrease in work hours had no effect on the resident examination scores.

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# SURGICAL GRAND ROUNDS MY MOST MEMORABLE CASE

PGY-1 residents can only work shifts of certain lengths and there had to be a proper rest time between shifts. Controlled studies have demonstrated that this had led to a decrease in “nodding off” in the operating room or when talking with a patient. Again, the evaluations demonstrated that there was a decrease in adverse events when the residents are appropriately rested. She also reported similar findings that have been identified in truck drivers and that a 24-hour shift, in terms of mental prowess, is comparable to a blood alcohol concentration of 1.0%.

The loss of sleep is more likely to affect fine motor skills which is important in a very delicate operation. Interpersonal communications are also affected; nurses identified some problems with disrespect and lack of attentiveness to patients. Communications are critical in a positive relationship with patients and also with residents communicating with their fellow residents. The resident problem with burnout and depression was noted, even pointing out that some suicides occur shortly after a resident finishes his/her training.

In conclusion, the WSU surgical residency program has a “Wellness Committee” which highlights the importance of picnics, baseball games, baby showers, Journal Club activity, medical jeopardy, and other factors that bring residents together and provide an important source of overall support. The rules of a successful resident were highlighted, including such things as eat when you can, sleep when you can, enjoy your colleagues when you can, and various other simple things. The chief resident should not be the first person in the hospital, and there should be help among the team members so that a female resident with young children doesn’t have to work on Mother’s Day. You also don’t leave the chief without providing important information, and the residency is a job that requires doing History and Physicals as a routine part of the occupation. She finished by pointing out that there is “no 5 pm in surgery,” and that sometimes residents must work overtime. There was an active question-and-answer session following the presentation.

The **Surgical Grand Rounds on Wednesday, 6/12/24** included presentations from all of the graduating surgical residents who described their experiences during their training. Each of the residents covered various interesting and humorous events from each of their five years and included many of the social events in which the team of senior residents became involved. They described their experiences at the various meetings, especially the Fall meetings of the American College of Surgeons and their presentations, which covered many areas and were appreciated by all.




JULY 2024



# REPORTS FROM THE OUTFIELD

Dr. Awni Shahait (WSUGS 2021) would like to share with the extended WSSS family a new publication that was accepted by the Journal of Surgical Research. Dr. Shahait is the Editor-in-chief of the JAP Academy Journal. We look forward to more publications by Dr. Shahait in the future.

[https://www.sciencedirect.com/science/article/abs/pii/S0022480423004900?CMX\\_ID=&SIS\\_ID=&dgcid=STMJ\\_AUTH\\_SERV\\_PUBLISHED&utm\\_acid=7513152&utm\\_campaign=STMJ\\_AUTH\\_SERV\\_PUBLISHED&utm\\_in=DM417386&utm\\_medium=email&utm\\_source=AC](https://www.sciencedirect.com/science/article/abs/pii/S0022480423004900?CMX_ID=&SIS_ID=&dgcid=STMJ_AUTH_SERV_PUBLISHED&utm_acid=7513152&utm_campaign=STMJ_AUTH_SERV_PUBLISHED&utm_in=DM417386&utm_medium=email&utm_source=AC)

	<p><a href="#"><u>Outcomes of Colectomy in United States Veterans With Cirrhosis: Predicting Outcomes Using Nomogram</u></a></p> <p>With growing incidence of liver cirrhosis worldwide, there is more need for a risk assessment tool to aid in perioperative management of cirrhotic pat...</p> <p><a href="http://www.sciencedirect.com">www.sciencedirect.com</a></p>
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## A Great Read From Wyoming

Dr. Joseph Primrose (WSUGS 1972) sent the following note to the Editor:

I always enjoy the monthly newsletter and this month's was especially noteworthy featuring you.

I still try to stay current with CME from the ACS website so I can maintain my Emeritus Physician status here in Wyoming, which means I can do volunteer medical care BUT no compensation and I am not allowed to write for narcotics (never was a fan of narcs thanks to you and Dr. Walt). I try to sometimes watch the WSU Grand Rounds and presentations on Wednesday mornings BUT that is 6 a.m. out here in Casper, Wyoming (too early for this Cowboy). I stay busy with fly fishing, model railroading, medical volunteering at rodeos, and honey

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# REPORTS FROM THE OUTFIELD

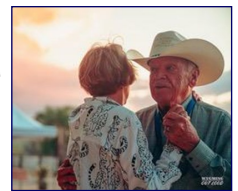
do's. My days at WSU were tough from 1968 through 1972 BUT made me the 82 year old careful doctor/person I am today. I will always be grateful for you and the WSU Department of Surgery.

The photo is the love of my life for 41 years, Vicki, and I at a friends farm "cutting a rug" ha ha!! P.S. Say hello to Anna for me.

Joseph Primrose, MD, FACS, FACEP (retired)

*"Many men go fishing all their lives without knowing that it is not fish they are after"*

Henry David Thoreau



## A Note from Douglas Clink (WSU/GS 1978/83)

I always appreciate your monthly newsletters from WSSS. I have now been in Alabama 41 years, but I still feel like, and I AM a Detoiter.

I recently received a brochure on the Midwest Surgical Association Meeting at Mackinac Island. Back in the '60s I was one of the Boy Scouts stationed on Mackinac to give tours for the visitors, George W. Romney was our Governor at that time.

Old memories made me re-up my MSA dues and schedule to attend the Midwest Surgical meeting next month, August 3-7, at the Grand Hotel. I was glad to see the Alexander J. Walt and Scott Warner Woods annual lectures on the program. I was fond of Dr. Woods, he would donate a night every month taking time off from his private practice to cover DRH with a board-certified surgeon. He and I had many nightly GSW cases together.

On reviewing all the talks and papers I presented as a WSU surgical resident (1978-83), I came across the paper I presented at the Midwest Surgical Association meeting at Lake Geneva, Wisconsin in 1981. I won the resident paper competition that year, it was subsequently published in The American Surgeon. **"Clinical Application of Organ Specific Isoamylases"**.

You have asked me over the past forty years if I have any stories about my rural practice in Alabama. The answer is yes, but I think the Midwest Surgical Meeting in Lake Geneva is one of the best.



Dr. Douglas Clink

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## REPORTS FROM THE OUTFIELD

As a third year WSU surgical resident in 1981, I had been married for seven years with three children, ages 4, 2, and 1. I weighed 145 pounds at 6'1". When Dr. Walt would trap me in an elevator he would say "I guess we are working you enough". On asking me how many children I had, I answered, "Three Sir". His reply was "You are getting too much time off". My wife Jann and I had our 50<sup>th</sup> wedding anniversary last month (June 8th, 1974).

Well, back to the story. Jann and I loaded up our old station wagon, the three kids, and left for Lake Geneva. The car's transmission went out halfway there, but we made it to within ten miles of the conference. The transmission repair was going to be \$400, which we certainly did not have. Back in 1981, winning the resident paper competition came with a \$300 reward. So our transmission got fixed.

The two attachments above are the kind letters I received from William H. Baker, MD (Loyola University Medical Center) and Arlie R. Mansberger Jr, MD (Editor of the American Surgeon). They seemed to be very impressed with the scientific based clinical research we were doing at Wayne State University.

I to have always given high praises to our program. I guess it should not have surprised me in 1983 how well known and respected SU was when I arrived in Alabama. Within a couple years I was asked to serve on the Alabama Chapter ACS Board and spent many years on the ACS Alabama Trauma Committee.

The in-depth clinical and scientific background WSU gave us as surgical residents allowed us to confidently go out and be independent surgical practitioners over very long careers, even in a town of 6,000 people in rural Alabama.

Douglas W. Clink MD, FACS (Retired)  
WSU Medical School 1974-1977  
WSU Surgery 1978-1983  
Guntersville, Alabama



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# REPORTS FROM THE OUTFIELD



LOYOLA UNIVERSITY MEDICAL CENTER

DEPARTMENT OF SURGERY  
William H. Baker, M.D.  
Professor and Chief  
Section of Peripheral  
Vascular Surgery

STITCH SCHOOL OF MEDICINE  
2160 South First Avenue  
Maywood, Illinois 60153  
(312) 531-3185

June 3, 1981

Douglas Clink, M.D.  
Wayne State University  
Department of Surgery 6C  
4201 St. Antoine  
Detroit, Michigan 48201

Dear Doctor Clink:

As Chairman of the Program Committee, I should like to congratulate you on the acceptance of your abstract entitled "Clinical Application of Amylase Isoenzymes" for presentation at the 23rd Annual Meeting of the Midwest Surgical Association scheduled for August 16-18, 1981 at the Abbey in Lake Geneva, Wisconsin. Six resident papers, three basic science and three clinical, were accepted for presentation from a large number of submitted abstracts.

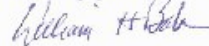
Your presentation will be on the first morning's program. The presentation will be judged, and the best basic science as well as the best clinical paper will be rewarded. A prize of \$300.00 goes to each winner.

An audio system will be provided by the Abbey as well as a 35mm projector designed for 2x2 slides. If your presentation requires additional audio visual equipment, please let me know. Please limit your formal presentation to 10 minutes.

I would appreciate it if you would inform your co-authors of the acceptance of this paper, as no communication is being sent to them from this office.

Again, congratulations on the acceptance of your abstract. I am looking forward to listening to your presentation this Summer.

Sincerely yours,



William H. Baker, M.D.  
Chairman, Program Committee

WHB/sb

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# REPORTS FROM THE OUTFIELD



LOYOLA UNIVERSITY MEDICAL CENTER

DEPARTMENT OF SURGERY

William H. Baker, M.D.  
Professor and Chief  
Section of Peripneural  
Vascular Surgery

STRICTH SCHOOL OF MEDICINE

2100 South First Avenue  
Maywood, Illinois 60153  
(312) 531-3185

August 24, 1981

Douglas Clink, M.D.  
Wayne State University 6C  
Health Care Institute  
4201 St. Antoine  
Detroit, Michigan 48201

Dear Doctor Clink:

It is a distinct pleasure and an honor to forward this check for \$300.00 to you for presenting the best Clinical Paper in the Resident Competition of the Midwest Surgical Association. You can feel proud of this award since the competition was keen and the decision regarding the best presentation difficult. In a final analysis, your clear presentation of a subject that was appreciated by most of the membership won for you.

Again, my personal congratulations on winning this award. We look forward to your future participation in our Association Meetings.

Sincerely yours,

William H. Baker, M.D.

WNB/sb

Enclosure

cc: Scott Woods, M.D.

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# REPORTS FROM THE OUTFIELD

## THE AMERICAN SURGEON

(Official Publication of The Southeastern Surgical Congress and North Pacific Surgical Association)

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November 4, 1981

Douglas Clink, M.D.  
 Wayne State University  
 School of Medicine  
 Department of Surgery  
 4201 St. Antoine  
 Detroit, Michigan 48207


Dear Dr. Clink:

Your manuscript entitled "Clinical Application of Organ Specific Insulinylase" has been reviewed by members of our Editorial Board and accepted for publication in an issue of our journal.

It will be published along with other papers from the Midwest Surgical Association Meeting and prior to the publication you will receive galley proof.

Thank you for submitting your manuscript to The American Surgeon.

Sincerely,



Arlie R. Mansberger, Jr., M.D.  
 Editor

ARM/ok

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JULY 2024



# REPORTS FROM THE OUTFIELD

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## Clinical Application of Organ Specific Isoamylases

DOUGLAS CLINK, M.D., DONALD WEAVER, M.D.,  
 DAVID BOLWMAN, M.D., SANDRA SESSIONS, M.D.,  
 JACQUELINE STEPHANY, B.S.

From the Wayne State University School of Medicine,  
 Department of Surgery, Detroit, Michigan

Since hyperamylasemia with or without abdominal pain is a frequently encountered problem, serum isoamylase analysis in 52 patients was done to see if the organ source of the amylase would be helpful in a clinical setting. Four patterns of hyperamylasemia were found: 1) AMY<sub>1</sub> (salivary) hyperamylasemia; 2) AMY<sub>2</sub> (pancreatic) hyperamylasemia; 3) Both AMY<sub>1</sub> and AMY<sub>2</sub> amylase elevated; and 4) macroamylasemia. A variety of

conditions other than pancreatitis were associated with hyperamylasemia, and some patients who were thought on clinical grounds to have pancreatitis had raised levels of AMY<sub>1</sub> (salivary) amylase.

This study suggests that hyperamylasemia alone is a poor indicator of pancreatic disease, and that isoamylase analysis will improve the accuracy with which amylase determinations are used.

**H**YPERAMYLASEMIA WITH and without abdominal pain is a common clinical problem. Amylase determination of sera and urine are routinely performed to confirm the clinical diagnosis of pancreatitis, yet, not all patients who have pancreatitis have elevated levels of serum amylase. Amylase determinations also are frequently obtained for suspected ischemic bowel, perforated bowel, blunt abdominal trauma, or cholecystitis. A fact not commonly appreciated is the multiple organ sources of amylase both within and outside the abdomen. These nonpancreatic sources of amylase often mimick potentially lethal conditions.

During the last decade, biochemical advances have established the knowledge and technique to distinguish organ specific isoamylases. In 1974, Kenney et al.<sup>1</sup> clinically correlated isoamylases that were measured by membrane electrophoresis with pancreatitis and renal failure. Due to an incomplete understanding of isoamylases at that time, other clinical correlations were not recognized. Today, through large genetic studies by Ward<sup>2</sup> and Laxova,<sup>3</sup> amylase is known to be a product of two genes that are closely linked on chromosome number 1. The two gene products, or isoamylases, are designated AMY<sub>1</sub> and AMY<sub>2</sub>. The pancreas only produces amylase from one gene, AMY<sub>2</sub>, and never from the other, AMY<sub>1</sub>. Furthermore, the pancreas is the only known source of AMY<sub>2</sub>. Patients who have undergone total pancreatectomy<sup>4,5</sup> or have had destruction of their pancreas by

cystic fibrosis<sup>6</sup> have no AMY<sub>2</sub> in their sera. Other organ sources of amylase only produce AMY<sub>1</sub>. The most notable are the salivary glands, but also the lacrimal glands,<sup>7</sup> lactating breasts,<sup>8,9</sup> lung,<sup>8</sup> eccrine glands,<sup>6</sup> and organs of Mullerian origin.<sup>6,10,11</sup> I.e., the ovaries, uterus, and fallopian tubes, produce AMY<sub>1</sub>. Ectopic production of AMY<sub>1</sub> is also well documented with bronchogenic,<sup>12,13</sup> ovarian,<sup>14,15</sup> and pancreatic carcinoma.<sup>14,16,17</sup>

Separations of isoamylases have been performed by chromatography, electrophoresis, and isoelectric focusing. Two to 20 active isoamylases can be separated. All of these isoamylases are biological modifications of AMY<sub>1</sub> and AMY<sub>2</sub>. These molecular modifications of glycosidation and deamination have been well explained by Karn 1977.<sup>8</sup> This paper is concerned with the clinical application of organ specific isoamylases. Membrane electrophoresis was used because of its adequate separation of AMY<sub>1</sub> and AMY<sub>2</sub> and because it can be adapted easily by hospital laboratories. This study shows that clinically significant hyperamylasemias can be categorized by organ specific isoamylase patterns.

### Study Population

The sera samples used in our study were obtained from patients treated at Detroit Receiving Hospital, an emergency hospital serving a large indigent population. The samples were either residual sera from the clinical laboratory or serum obtained from the patient after signed consent as designated by our Human Research Committee.

### Materials and Methods

The total amylase activity of each specimen was determined by the Amylochrome Methodology (Am Sci-

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entific Products, Romulus, MI 48174). In this method, amylase acts directly on a chromogenic substrate, hydrolyzing and releasing a blue dye which is measured photometrically at a wavelength of 625 nm. The method is linear between 100 and 600 DU/100 ml (dyeunits). For specimens of values less than 100 DU, a nonlinear curve was established by known standards, and the samples were incubated for twice the normal period (30 minutes).

The electrophoretic method that was employed was a modification of that described by Legaz and Kenney.<sup>10</sup> Fractionation of the isozymes was carried out utilizing a standard "microzone" electrophoresis cell on cellulose acetate membranes (Beckman Instruments). Our best resolution was achieved at 4 C using a discontinuous buffer system: Trisya\* (Sigma Chemical Co., St. Louis, MO 63178), 0.15 mmol/liter titrated to pH 9.15 with boric acid in the anodal chamber and Barbital buffer<sup>®</sup> (Sigma) 66 mmol/liter sodium barbital and 13 mmol/liter barbital pH 8.6 in the cathodal chamber. The power source (Beckman Model R-120) maintained a constant voltage of 400 V for two hours.

The cellulose acetate membranes were soaked for a minimum of two hours in a solution containing equal parts of cathodal and anodal buffer with 2 per cent albumin. When the membranes were fully saturated, they were blotted to remove excess surface moisture and mounted in the electrophoresis cell. Two minutes were allowed to lapse before application of specimens. Samples were applied using a 0.25 µl applicator (Beckman Instruments, Fullerton, CA 92634). Best results were seen when all samples on any one electrophoretic run approximated each other in total amylase activity. Therefore, dilutions and/or multiple applications were made to achieve amylase levels of 800 to 1000 DU. Up to six applications could be made without causing excess diffusion and smearing of the bands. A pancreatic standard, pancreatic cyst fluid, and a salivary standard, pooled saliva, were placed in two of the eight slots for each run.

The method used for developing the cellulose acetate membranes has been described by Benjamin and Kenney.<sup>1</sup> Twelve ml of a 1 per cent agarose solution was heated till clear. Six phadebas tablets (Pharmacia, Uppsala, Sweden) were slowly dissolved and stirred frequently. The solution was allowed to cool to 47 C and quickly poured onto a glass plate of approximately 6 x 10 cm. Once it was set, the agar was flipped so that the membrane could be laid on the reverse side, which was smooth and free of any air bubbles. Next, the membrane was placed on the agar plate and incubated in a water bath of 37 C for a period not to exceed 20 minutes. Incubation beyond 20 minutes resulted in smearing. The speed with which the membrane is dried is crucial to minimizing wick flow and to maintaining

the level of separation achieved during electrophoresis. A common blow dryer was found to work exceptionally well. The membranes can be dried in as little as one minute. The membranes were then scanned by a densitometer, Beckman RI12, at 600 nm. The areas under the curves were simultaneously integrated by the densitometer giving relative ratios of the isoenzyme activity present.

## Results

Eleven healthy volunteers served as controls to establish a normal range of total amylase for our laboratory and also to establish the normal sera ratio of AMY<sub>1</sub> to AMY<sub>2</sub>. Our normal amylase was 120 to 240 DU. The isoamylase ratio of AMY<sub>1</sub> to AMY<sub>2</sub> was 59 per cent to 41 per cent, with a standard error of the mean of 2 per cent.

Table 1 summarizes the analysis of 52 patients with known hyperamylasemia. Their serum was analyzed for both total amylase and organ specific isoamylase. Four isoamylase patterns were found. These were hyper AMY<sub>2</sub>, (Group I); hyper AMY<sub>1</sub>, (Group II); both elevated AMY<sub>1</sub> and AMY<sub>2</sub>, (Group III); and patients with no AMY<sub>1</sub> or AMY<sub>2</sub>, (Group IV). Group I consisted of 34 patients. Of these patients, fourteen had operatively proven pancreatic pseudocysts, and 20 had clinical pancreatitis. Of these 34 patients, 31 were known alcoholics. Their average amylase level was 562 DU on admission, and they had an isoamylase pattern which was 81 per cent AMY<sub>2</sub> and 19 per cent AMY<sub>1</sub>. Group II consisted of nine patients with pulmonary disease or endoscopy proven gastritis. Their amylase levels averaged 314 DU, and their isoamylase pattern was 20 per cent AMY<sub>2</sub> and 80 per cent AMY<sub>1</sub>. Group III consisted of six patients. All six patients were diagnosed as having renal failure. Their average amylase level was 264 DU, and they had 54 per cent AMY<sub>2</sub> and 46 per cent AMY<sub>1</sub>. Group IV consisted of three patients with no identifiable AMY<sub>1</sub> or AMY<sub>2</sub>. These patients had macroamylasemia which gives a diagnostic isoenzyme different from AMY<sub>1</sub> or AMY<sub>2</sub>. Their average amylase level was 884 DU ± 416. All groups were shown to be statistically different from each other ( $p < .0005$ ) by the two-tailed student *t* test.

## Discussion

The data presented in Table 1 are in agreement with the present understanding of isoamylase production. The majority of the patients either had hyper AMY<sub>2</sub> or hyper AMY<sub>1</sub>, Groups I and II. In Group I, patients with pancreatitis and operatively proven pancreatic pseudocysts had elevation of AMY<sub>2</sub> but normal levels of AMY<sub>1</sub>. Group II consisted of nine patients with

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TABLE 1. Isoamylase Patterns

	AMY <sub>1</sub> / AMY <sub>2</sub> ± SEM	Total Amylase (U)	Diagnosis
Group I (↑ AMY <sub>1</sub> )	19% / 81%* ± 2.7%	562 ± 88	Pancreatitis (20) Pancreatic pseudocyst (14)
Group II (↑ AMY <sub>2</sub> )	80% / 20%* ± 4.9%	714 ± 31	Gastritis (5) Pulmonary disease (4)
Group III (↑ Both)	46% / 54%* ± 8.5%	264 ± 56	Renal disease (6)
Group IV (N)	38 / 62	884 ± 416	Macroamylasemia (3)
Controls	19% / 81%* ± 2.0%	180 ± 22	Healthy volunteers (11)

\* =  $p < .0005$  two tailed student *t* test.

elevated levels of AMY<sub>2</sub> but normal AMY<sub>1</sub>. These patients had a nonpancreatic source of their hyperamylasemia. Our patient population has a disproportionately large number of male alcoholics. Alcoholic gastritis and aspiration pneumonias are frequently seen in these patients. However, another source of hyper AMY<sub>2</sub> is frequently seen at other hospitals. These are the hyperamylasemias of Mullerian tissues, i.e., ectopic pregnancies, ruptured ovarian cysts, and pelvic inflammatory disease.

The third isoamylase pattern that was noted was an elevation in both AMY<sub>1</sub> and AMY<sub>2</sub>. This occurred in six patients with renal disease. Studies by Douine<sup>20,21</sup> in 1972 showed that 24 per cent of serum amylase is cleared through the kidneys. Therefore, with decreased renal clearance, both AMY<sub>1</sub> and AMY<sub>2</sub> are elevated. The other 76 per cent of the amylase that is not cleared through the kidney is catabolized. Warsaw<sup>22,23</sup> has shown that in severe liver disease, elevation in both AMY<sub>1</sub> and AMY<sub>2</sub> occurs. The liver is, therefore, a suspected source of amylase catabolism. The fourth and last isoamylase pattern is that of macroamylasemia. Macroamylase is a serum protein amylase bound to usually IGG or IGA.<sup>23</sup> It has a pathomimetic isoamylase pattern with no AMY<sub>1</sub> or AMY<sub>2</sub> present. This was found in three of our 52 patients, or 6 per cent. The incidence of macroamylasemia in the general population is 0.5 per cent, and in the hospital population, it is 2 per cent.<sup>24</sup>

TABLE 2. Organ Specificity

AMY <sub>1</sub>	AMY <sub>2</sub>
Salivary glands	Pancreas
Lacrimal glands	
Mucous glands	
Ecocrine glands	
Lung	
Mullerian tissues	
Ovaries	
Uterus	
Fallopian tubes	
Cancers	
Bronchogenic	
Ovarian	
Pancreatic	

Hyperamylasemia will fall into one of four isoenzyme patterns. These patterns are distinct so that with isoamylase determination, clear differentiation between pancreatic and nonpancreatic hyperamylasemia is possible. The following three case studies illustrate the importance of this differentiation.

### Case Reports

#### Case 1

**History.** A 49-year-old black woman presented with a one-week history of lower abdominal cramping pain. She was a heavy ethanol user in the past with previous episodes of pancreatitis. She was nauseated but had no vomiting or change in her bowel habits. Past medical history was significant for chronic renal failure.

**Physical Examination.** Her temperature was 98.6 F, blood pressure was 106/72 mm Hg, and pulse was 82 beats per minute. The patient appeared older than her stated age, and her abdomen was soft with some suprapubic and periumbilical tenderness. Rectal and pelvic exams were negative.

**Laboratory Findings.** Hemoglobin was 13.2 g/dl, leukocyte count was 10,800 cu mm, and SMA12 was normal, except for creatinine of 4.3 mg/dl and a BUN of 32 mg/dl. Her amylase was 312 IU. Her urinalysis showed a 1+ bacteruria and six to 12 leukocytes per high powered field.

**Hospital Course.** The patient was admitted to the hospital and treated with IV fluids and ampicillin for her genitourinary tract infection. Her abdominal symptoms stopped on the second hospital day. She then underwent an abdominal ultrasound, upper gastrointestinal, lower gastrointestinal, and oral cholecystogram for workup of her recurrent hyperamylasemia. All of these studies proved to be negative. The patient spent ten days in the hospital for her urinary tract infection, and her amylase remained at elevated levels. Her isoamylase determination showed 55 per cent AMY<sub>1</sub> and 45 per cent AMY<sub>2</sub>, which is consistent with hyperamylasemia of renal failure.

#### Case 2

**History.** A 29-year-old black man had a one-day history of severe epigastric pain, which was aggravated by eating. The patient had nausea and vomiting since its onset; the vomitus was of bilious material. He had a previous history of multiple episodes of pancreatitis.

**Physical Examination.** His temperature was 99.4 F, blood pressure was 160/110 mm Hg, and pulse was 120 beats per

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minute. Patient appeared to be in acute distress. Abdominal guarding was noted in the epigastrium; rectal was guaiac negative.

**Laboratory Findings.** Amylase was 586 DU, hemoglobin was 17.2 gm/dl, and leukocyte count was 12,200/mm<sup>3</sup>; SMA 12 was within normal limits.

**Hospital Course.** He responded to nasogastric tube suction and IV resuscitation, with resolution of his abdominal tenderness after 48 hours. Diet was tolerated. He was discharged on the fourth hospital day with an amylase of 82 DU. His isoenzyme pattern was 96 per cent AMY<sub>2</sub> and 4 per cent AMY<sub>1</sub>, which is consistent with pancreatic disease.

### Case 3

**History.** A 42-year-old black man was a known alcoholic with previous episodes of pancreatitis. He presented to the hospital intoxicated and complaining of severe abdominal pain.

**Physical Examination.** His temperature was 99.8 F, blood pressure was 110/60 mm Hg, and pulse was 120 beats per minute. There was voluntary guarding over the upper abdomen. Rectal was guaiac negative.

**Laboratory Findings.** He had a hemoglobin of 15 gm/dl, leukocyte count of 5000/mm<sup>3</sup>, amylase of 450 DU, and an ethanol level of 250. Chest roentgenogram showed a right lower lobe atelectasis, and abdominal films showed an ileus.

**Hospital Course.** The patient was admitted to the hospital with the diagnosis of pancreatitis. A nasogastric tube was inserted, and IV hydration begun. After 12 hours, the patient had a respiratory arrest. He was intubated and died of pulmonary sepsis three days later. His isoenzyme pattern was 93 per cent AMY<sub>2</sub> and 7 per cent AMY<sub>1</sub>. This is consistent with a nonpancreatic source of hyperamylasemia. On admission, the patient had a right lower lobe streptococcal pneumonia. His hyperamylasemia was most likely secondary to his lung pathology. Instead of alerting the admitting physician to the possibility of a pulmonary problem, the hyperamylasemia actually contributed to the physician overlooking the minimal chest roentgenogram findings at the time of admission.

### Conclusions

Pancreatitis will remain a clinical diagnosis. Organ specific amylase determination will rarely diagnose pancreatitis that is not already suspected clinically. Its value lies in its ability to positively rule out the pancreas as a source of a patient's hyperamylasemia. It is the patient with asymptomatic hyperamylasemia or amylasemia with unusual symptoms where the greatest and costliest errors in diagnosis are made.

Hyperamylasemia alone is a poor indicator of pancreatic disease. Organ specific isoenzyme determination can reliably differentiate pancreatic from nonpancreatic hyperamylasemia. In treating patients with hyperamylasemia, one must suspect and recognize nonpancreatic sources. This will prevent the errone-

ous diagnosis of pancreatitis and delay in diagnosing the true presenting disease.

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## REPORTS FROM THE OUTFIELD

**Dr. Christopher Goltz, MD (WSUGS 2013)**

Dear Dr. Lucas,

I must first apologize as I have taken my time in writing back to you since we discussed cases at the Detroit Trauma Symposium. Knowing that it is better to be late than never, I have written below some of my experiences with traumatic vascular injury.

I am currently practicing in Flint, Michigan and credit my experiences in training in Detroit with my comfort level in treating trauma patients. For some time during my first several years of my practice, I was known as the 'trauma guy' as all of the injuries needing arterial reconstruction seemed to come in while I was on call. Fortunately, for my sanity, I have had this black cloud move from over my head and the cases have since been spread more evenly amongst my partners. We have a good relationship with the trauma surgeons at Hurley Hospital, which tends to have the majority of the penetrating trauma in our region. The trauma system set up there works well, and despite the economic limitations that are inherent to a county hospital, excellent care is provided.



Dr. Christopher Goltz

One morning I was called in by one of my junior partners to help with a left subclavian injury. Fortunately, one of the trauma surgeons was facile and able to place a clamp on the origin of the left subclavian in the chest. When I arrived, the tissues in the affected area were shredded and it was difficult to discern any named structures. In order to facilitate exposure, the clavicle was resected, and we were able to define the distal subclavian. From this point the left carotid was not involved in the injury and a carotid to subclavian bypass was performed with good result. We did find a large section of clot in the subclavian that was removed with passage of embolectomy catheters.

I was recently asked to assist with a patient who was bleeding from an exposure in the pelvis. The patient had a retroperitoneal mass likely consistent with lymphoma but attempts at percutaneous biopsy had been non diagnostic. A robotic approach to biopsy was, therefore, attempted. On entry the surgeon noted dense inflammatory tissue that made it impossible to define planes. Several biopsies were taken but none had adequate pathology for diagnosis, and as deeper sections were obtained the external iliac artery was injured. I was called in at this

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point and after removing the troublesome robot and opening the section, I was able to gain control of the common and proximal external iliac. Suture ligation of the injured segment was performed and we did a common iliac to common femoral bypass as the external was encased in tumor.

I operated on a young man with a gunshot wound to the groin. CTA demonstrated a large pseudoaneurysm. On opening the groin the superficial femoral had been transected + its origin. Additionally, the common femoral vein had a large laceration. We used a segment of contralateral saphenous vein for repair of the arterial injury. As the injury was to the common femoral vein we felt that repair should be attempted. I first did a patch angioplasty repair, however, noted that this significantly narrowed the vessel, and subsequently a short interposition PTFE bypass was done. The patient generally did well, and was discharged. He did present several weeks later with leg swelling and the vein repair was noted to be occluded but he declined attempts at repair of this as his symptoms were not severe.

One of the most frustrating traumatic injuries that I have worked on was a 45-year-old male who was dropped off at the ER of a non-trauma center hospital for a gunshot wound to the leg. The bullet had traversed between the tibia and fibula, and in avoiding all of the bones had managed to injure all three tibial vessels. We did a popliteal to posterior tibial bypass with a segment of contralateral saphenous vein. We decided to do a completion angiogram which showed no flow past the end of the bypass. I felt a technical error was most likely and the bypass was redone, embolectomy catheters and dilators were passed, vasodilators were given, and after the revision was done, there was still no flow in the bypass. We then revised the distal to a more distal segment of the artery. Final angiogram was done that again showed no flow. I was frustrated at this point and given the multiple revisions, I felt that there was nothing more that could be done. We closed and in recovery the patient was examined and had a palpable pulse, and despite extensive efforts to resolve it, arterial spasm was the culprit, not any technical error.

Finally, I wanted to note how much I enjoyed the Trauma Symposium this year. The presentations reinforced to me the basis of trauma care to the care of so many other patients. It seems clear to me that although we have some differences in training and daily practice going back to the basics is so important for all of us. Thanks for the invitation to write.

Best wishes,

Christopher Goltz, MD, FACS





## EXCERPTS FROM THE LOG BOOK DOWN MEMORY LANE

4/4/72 - Staff: Dr. Zwi Steiger; Chief Resident: Dr. A. Ledgerwood

1. BH: GSW left chest and abdomen, exploratory laparotomy, splenectomy, closure two holes diaphragm, and insertion left chest tube (sponge count was incorrect; no sponges seen on three abdominal x-rays).
2. HB: Tracheostomy for respiratory distress.
3. CJ: Multiple stabs to abdomen with a very distended abdomen and absent BP and pulse on arrival. Resuscitated with left thoracotomy and heart was beating. Aorta clamped and patient taken to O.R. Laparotomy showed stab right lobe of liver which was bleeding, and the liver was markedly cirrhotic. Unable to get BP above 60 with aorta clamped. Patient expired in O.R.



Dr. Anna Ledgerwood

4/5/72 - Staff: Dr. R. Wilson

1. EW: Dressing change.
2. GM: Previous shotgun wound to chest wall, treated with split-thickness skin graft.

4/6/72 - Staff: Dr. J. Kirkpatrick

1. OB: Stab back and flank, explored wounds and inserted chest tubes.
2. TM: 43yo with laceration extensor tendon fourth and fifth fingers, repaired.
3. RB: Laceration flexor carpi radialis longus and brevis and flexor tendons to 2,3,4,5; all repaired.

4/7/72 - Staff: Dr. J.C. Rosenberg

1. DP: 22yo with GSW abdomen and hypotension. Had left thoracotomy with clamping of aorta in O.R., followed by laparotomy with thru-and-thru small bowel and thru-and-thru left common iliac artery at its origin. Treated with end-to-side anastomosis of the iliac to the aorta (patient was filmed as part of movie on "Priorities in Care of the Injured Patient").
2. JC: Stab abdomen, treated with laparotomy, wound penetrating but no visceral injury.
3. ET: I&D ischiorectal abscess.

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## "EXCERPTS FROM LOG BOOK" - DOWN MEMORY LANE, cont...

4/8/72 - Staff: Dr. C. Huang

1. RS: Mycotic aneurysm left common carotid artery, treated with sternal split and ligation of left common carotid at its origin.
2. ZG: 4yo with laceration right third finger, repaired.
3. RM: Blunt trauma abdomen with ruptured spleen, treated with splenectomy.

4/9/72 - Staff: Dr. A. Arbulu

1. GJ: 32yo with stab right chest and abdomen, treated with right thoracotomy and exploratory laparotomy with suture of liver laceration and ligation of intercostal vessels.
2. AB: Shotgun wound abdomen and left arm in 22yo, treated with debridement of arm and closure of four holes stomach, transverse colon, and small bowel.

4/11/72 - Staff: Dr. G. Shannon

1. JD165: Stab left neck and right arm with transected left common carotid artery and vagus nerve. Treated with end-to-end anastomosis of the artery. Explored right brachial vessels for stab of arm, no injury found.
2. LW: 27yo with laceration right wrist and transection of all extensor tendons; all repaired.
3. WG: GSW abdomen in 37yo with 16 holes in small bowel, treated with primary closure of 8 wounds and small bowel resection with anastomosis.

4/11/72 - Staff: Dr. C. Benavides

1. LM: 69yo with incarcerated right inguinal hernia, treated with repair and orchiectomy.
2. TG: GSW abdomen in 22yo with thru-and-thru wound right lobe of liver and thru-and-thru duodenum which was primarily closed.
3. TT: 10yo was strangled and raped, fractured larynx. Admitted with marked respiratory distress, had tracheostomy in O.R., and had respiratory arrest prior to intubation but was resuscitated.
4. WC: DT's, pancreatitis, and pneumonia with respiratory distress, treated with tracheostomy.
5. ZB: Upper GI bleed in 21yo with findings of gastritis, treated with vagotomy and antrectomy.



## WSU MONTLY CONFERENCES 2024

Death & Complications Conference  
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Didactic Lectures — 8 am  
Kresge Auditorium

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Death & Complications Conference  
“Esophageal Achalasia: Diagnosis and Current Surgical Approaches”  
**Alyssa Stroud, MD**

Graduating Fellow, Minimally Invasive Surgery  
DMC/WSU School of Medicine

### Wednesday, July 17

Death & Complications Conference  
**Robert Joslin, MD**

DMC/WSU School of Medicine

### Wednesday, July 24

Death & Complications Conference  
**Kenton Zehr, MD**

DMC/WSU School of Medicine

### Wednesday, July 31

Death & Complications Conference  
**Brandi Miller DO**

DMC/WSU School of Medicine

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#### EVALUATIONS

Surgical Death and Complications Rounds #2024321125, Jan-April 2024 CME Reflective Evaluation:

<https://www.surveymonkey.com/r/MJMJNVV>

Surgery Grand Rounds #2024321064, Jan-April 2024 CME Reflective Evaluation:

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Name as it appears on card: \_\_\_\_\_

Signature: \_\_\_\_\_

Billing address of card (if different from above):

Street Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

\*I want to commit to becoming a charter life member with payment of \$1000 per year for the next ten (10) years.

Send check made payable to **Wayne State Surgical Society** to:

Charles Lucas, MD  
Department of Surgery  
Detroit Receiving Hospital, Room 2V  
4201 St. Antoine Street  
Detroit, Michigan 48201

**MARK YOUR CALENDARS**

*Midwest Surgical Association Annual Meeting  
August 4-6, 2024  
Grand Hotel  
Mackinac Island, Michigan*

*88th Annual Meeting of the American Association for  
the Surgery of Trauma/Clinical Congress of Acute  
Care Surgery  
September 11-24, 2024  
Las Vegas, Nevada*

*American College of Surgeons Clinical Congress  
Annual Meeting  
October 19-22, 2024  
San Francisco, California*



**Please Update Your Information**

The WSUSOM Department of Surgery wants to stay in touch. Please email Charles Lucas at [clucas@med.wayne.edu](mailto:clucas@med.wayne.edu) to update your contact information.



## Missing Emails

Over the years the WSU Department of Surgery has lost touch with many of its alumni. If you know the email, address, or phone number of the following WSU Department of Surgery Residency Program graduates please email us at [clucas@med.wayne.edu](mailto:clucas@med.wayne.edu) with their information so that we can get them on the distribution list for the WSU Department of Surgery Alumni Monthly Email Report.

Mohammad Ali (1973)

David B. Allen (1992)

Tayful R. Ayalp (1979)

Juan C. Aletta (1982)

Kuan-Cheng Chen (1976)

Elizabeth Colaiuta (2001)

Fernando I. Colon (1991)

David Davis (1984)

Teoman Demir (1996)

Judy A. Emanuele (1997)

Lawrence J. Goldstein (1993)

Raghuram Gorti (2002)

Karin Haji (1973)

Morteza Hariri (1970)

Harrison, Vincent L. (2009)

Abdul A. Hassan (1971)

Rose L. Jumah (2006)

R. Kambhampati (2003)

Aftab Khan (1973)

Samuel D. Lyons (1988)

Dean R. Marson (1997)

Syed A. Mehmood (2007)

Toby Meltzer (1987)

Roberto Mendez (1997)

Mark D. Morasch (1998)

Daniel J. Olson (1993)

David Packer (1998)

Y. Park (1972)

Bhavik G. Patel (2004)

Ami Raafat (1998)

Kevin Radecki (2001)

Sudarshan R. Reddy (1984)

Renato G. Ruggiero (1994)

Parvid Sadjadi (1971)

Samson P. Samuel (1996)

Knavery D. Scaff (2003)

Steven C. Schueller (1974)

Anand G. Shah (2005)

Anil Shetty (2008)

Chanderdeep Singh (2002)

David G. Tse (1997)

Christopher N. Vashi (2007)

Larry A. Wolk (1984)

Peter Y. Wong (2002)

Shane Yamane (2005)

Chungie Yang (2005)

Hossein A. Yazdy (1970)

Lawrence S. Zachary (1985)

## Wayne State Surgical Society

*The Wayne State Surgical Society (WSSS) was established during the tenure of Dr. Alexander J. Walt as the Chairman of the Department of Surgery. WSSS was designed to create closer contact between the current faculty and residents with the former resident members in order to create a living family of all of the WSU Department of Surgery. The WSSS also supports department activities. Charter/Life Membership in the WSSS is attained by a donation of \$1,000 per year for ten years or \$10,000 prior to ten years. Annual membership is attained by a donation of \$200 per year. WSSS supports a visiting lecturer each fall and co-sponsors the annual reception of the department at the annual meeting of the American College of Surgeons. Dr. Scott Davidson (WSU/GS 1990/96) passed the baton of presidency to Dr. Larry Narkiewicz (WSU/GS 2004/09) at the WSSS gathering during the American College of Surgeons meeting in October 2022. Members of the WSSS are listed on the next page. Dr. Narkiewicz continues in the hope that all former residents will become lifetime members of the WSSS and participate in the annual sponsored lectureship and the annual reunion at the American College of Surgeons meeting.*



*Members of the Wayne State Surgical Society  
Charter Life Members*

Ahn, Dean	Clink, Douglas	Gerrick Stanley	Lucas, Charles E.	Ramnauth, Subhash	vonBerg, Vollrad J. (Deceased)
Albaran, Renato G	Chmielewski, Gary W.	Grifka Thomas J. (Deceased 2022)	Malian, Michael S.	Rector, Frederick	Washington, Bruce C.
Allaben, Robert D. (Deceased)	Colon, Fernando I.	Gutowski, Tomasz D.	Marquez, JoFrances	Rose, Alexander	Walt, Alexander (Deceased)
Ames, Elliot L.	Conway, William Charles	Herman, Mark A.	Martin, Donald J., Jr.	Rosenberg, Jerry C.	Weaver, Donald
Amirikia, Kathryn C.	Davidson, Scott B.	Hinshaw, Keith A.	Maxwell, Nicholas	Sankaran, Surya	Whittle, Thomas J.
Anslow, Richard D.	Dente, Christopher	Holmes, Robert J.	McGuire, Timothy	Sarin, Susan	Williams, Mallory
Antonioli, Anita L.	Dujon, Jay	Huebl, Herbert C.	McIntosh, Bruce	Sferra, Joseph	Wills, Hale
Auer, George	Edelman, David A.	Johnson, Jeffrey R.	Missavage, Anne	Shapiro, Brian	Wilson, Robert F.
Babel, James B.	Engwall, Sandra	Johnson, Pamela D.	Montenegro, Carlos E.	Silbergleit, Allen (Deceased)	Wood, Michael H.
Bassett, Joseph (Deceased)	Francis, Wesley	Kline, Gary	Narkiewicz, Lawrence	Smith, Daniel	Zahriya, Karim
Baylor, Alfred	Flynn, Lisa M.	Kovalik, Simon G.	Nicholas, Jeffrey M.	Smith, Randall W.	
Bouwman, David	Fromm, Stefan H.	Lange, William (Deceased)	Novakovic, Rachel L.	Stassinopoulos, Jerry	
Bradley, Jennifer	Fromm, David G	Lau, David	Perrone, Erin	Sullivan, Daniel M.	
Busuito, Christina	Galpin, Peter A.	Ledgerwood, Anna M.	Porter, Donald	Sugawa, Choichi	
Crocco, William C.	Gayer, Christopher P.	Lim, John J.	Prendergast, Michael	Tuma, Martin	



*Members of the Wayne State Surgical Society—2023-24 Dues*

Alpendre, Cristiano V.	Goltz, Christopher J.	Marquez, JoFrances	Siegel, Thomas S.
Bambach, Gregory A.	Gutowski, Tomasz	Martin, Jonathan	Tarras, Samantha
Carlin, Arthur	Hall, Jeffrey	McGee, Jessica D.	Taylor, Michael G.
Chmielewski, Gary	Hollenbeck, Andrew	Mostafa, Gamal	Tennenberg, Steven
Dawson, Konrad L.	Joseph, Anthony	Nevonen, Marvin G.	Thoms, Norman W.
Dolman, Heather	Klein, Michael D.	Paley, Daniel S.	Vasquez, Julio
Dulchavsky, Scott A.	Kline, Gary	Park, David	Ziegler, Daniel W.
Fernandez-Gerena, Jose	Kosir, Mary Ann	Porterfield, Lee	
Field, Erin	Lloyd, Larry	Shanti, Christina	



*Operation-A-Year  
January 1—December 31, 2024*



The WSU department of Surgery has instituted a new group of alumni who are remembering their training by donating the proceeds of one operation a year to the department. Those who join this new effort will be recognized herein as annual contributors. We hope that all of you will remember the department by donating one operation, regardless of difficulty or reimbursement, to the department to help train your replacements. Please send you donation to the Wayne State Surgical Society in care of Dr. Charles E. Lucas at Detroit Receiving Hospital, 4201 St. Antoine Street (Room 2V), Detroit, MI, 48201.

Albaran, Renato G.	Dittinbir, Mark	Holmes, Robert J.	McGuire, Timothy	Sullivan, Daniel M.
Antonioli, Anita L.	Engwall, Sandra	Johnson, Jeffrey R.	McIntosh, Bruce	Wood, Michael H.
Bambach, Gregory A.	Fernandez-Gerena, Jose	Johnson, Pamela D.	Porter, Donald	Ziegler, Daniel
Bradley, Jennifer	Gutowski, Tomasz	Joseph, Anthony	Prendergast, Michael	
Busuito, Christina	Gayer, Christopher P.	Lim, John J.	Siegel, Thomas S.	
Chmielewski, Gary W.	Herman, Mark A.	Malian, Michael	Smith, Daniel	
Dente, Christopher	Hinshaw, Keith A.	Marquez, JoFrances	Smith, Randall	



**WSU SOM ENDOWMENT**

The Wayne State University School of Medicine provides an opportunity for alumni to create endowments in support of their institution and also support the WSSS. For example, if Dr. John Smith wished to create the “Dr. John Smith Endowment Fund”, he could donate \$25,000 to the WSU SOM and those funds would be left untouched but, by their present, help with attracting other donations. The interest at the rate of 4% per year (\$1000) could be directed to the WSSS on an annual basis to help the WSSS continue its commitment to improving the education of surgical residents. Anyone who desires to have this type of named endowment established with the interest of that endowment supporting the WSSS should contact Ms. Lori Robitaille at the WSU SOM> She can be reached by email at [lrobitai@med.wayne.edu](mailto:lrobitai@med.wayne.edu).