PATHOLOGY BYTES

LSU Health Sciences Center Department of Pathology ♦ Spring 2021

Inside This Issue

Pathology Department Administrative Staff

Gordon L. Love, MD
Department Head
glove2@lsuhsc.edu

Karen Cappiello
Business Manager
Kcappi@lsuhsc.edu

Tammy Waltz
Assistant Business Manager
Twaltz@lsuhsc.edu

Elizabeth "Liz" Monnin
Residency Coordinator
Esoroe@lsuhsc.edu

LSU New Orleans Pathology Residency Program

LSUHSC-NO-Pathology

lsunopath

Chair's Report:

One of my favorite sayings is "if you don't know where you are going, you will probably end up somewhere else (D.P. Campbell)." We have worked on the following projects for a long time and now we are almost at our goals:

1. ***Transitioning the LSUHSC Pathology Department into laboratory testing*:** Three years ago, the Pathology floor in the Medical Education Building was where you would go to get your mail but now there is more. Read inside about the development of the Coronavirus Laboratory on the Pathology floor in the Medical Education Building at the LSUHSC Medical School. The Coronavirus Laboratory operates under my medical direction and the supervision of Grace Athas, Ph.D., CLS, and possesses technologies for PCR detection of SARS-CoV-2 using the BioRad PCR with SeeGene reagents and analysis (initiation of testing in June, 2020). During April, 2021, the Illumina NextSeq 550 DX PCR will be validated for SARS-CoV-2 sequencing for the identification of variants. The LSUHSC Coronavirus Laboratory will become one of the few clinical laboratories (meaning laboratories that produce results for patient diagnosis and treatment) in the United States to perform coronavirus sequencing. Most other performing laboratories are public health operated or research facilities. The Coronavirus Laboratory is a joint operation with the LSUHSC Department of Genetics with Dr. Lucio Miele and Dr. Judy Crabtree. LSUHSC should be proud of this accomplishment. When the need for coronavirus testing abates, the laboratory will adopt cancer genomics testing.
2. ***Completion of the Tulane Avenue pedestrian bridge*:** While I contributed nothing to the project, I anticipate that this bridge will improve access to the Pathology offices and Laboratories in the LSUHSC Medical Education Building. The LSUHSC multiheaded microscope room and presentation rooms will become viable options for teaching. For specific information about the bridge, read inside.
3. ***Enhancement of Anatomic Pathology laboratory space at UMC with new Pathologist Offices*:** UMC cytology will be moving into adjacent space at UMC to free up space in the very tight Anatomic Pathology laboratory. In the process, two new Pathologist offices will become available. There is potential to create more spacious reading areas for hematology and other AP sections. Involvement of Pathologists in this process is invited. The move may be occurring as soon as June, 2021.
4. ***Establishing mycology services at UMC*:** Fungus identification services have been gone a long time from LSUHSC/UMC. We are bringing fungal

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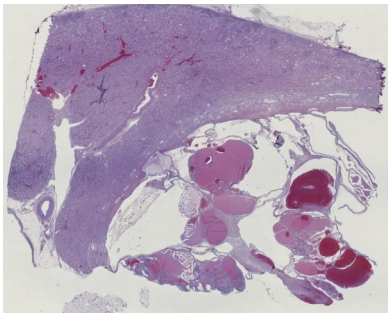
identification in house at UMC on April 15, 2021. As a mycologist myself, I have always held the opinion that New Orleans is a great place for fungi. Starting the new laboratory section at UMC was delayed by various staffing and other issues - most recently COVID. A complete microbiology laboratory will improve patient diagnosis and enhance resident experiences.

5. ***Improving resident training***: Dr. Avery Ragan and I are in the final stages of developing a structured chemistry rotation which we should be able to offer soon. We may be able to include Tulane residents in the activity which may open the door to further cooperation with Tulane in sharing educational resources.
6. ***Revamping the Resident Coordinator Office:*** Elizabeth Monnin, MT, has enabled a more nimble and responsive office that is better positioned to satisfy resident and institutional concerns. This improved function was on display during the recent virtual resident interviews which Liz handled flawlessly. Liz also oversees the Aperio Digital Scanner. She was the former LSUHSC IT medical technologist.

Gordon L. Love, M.D.

Aperio Slide Scanner Purchased



An example of low-power scanning that the department is using for conference presentations and digital archiving.

We are excited to have recently purchased an Aperio Digital Slide Scanner which provides rapid access to crisp, true-color digital images to which you can adjust magnification, pan and zoom, compare different stains, annotate areas of interest and perform image analysis. The scanner is being used to scan 3,500 high resolution whole slide images for the LSUHSC Cancer Center's Whole Slide Imaging Study. The data collected from these scanned images will aid in valuable pediatric cancer research. Additionally, we will be able to scan images to use in our resident teaching.

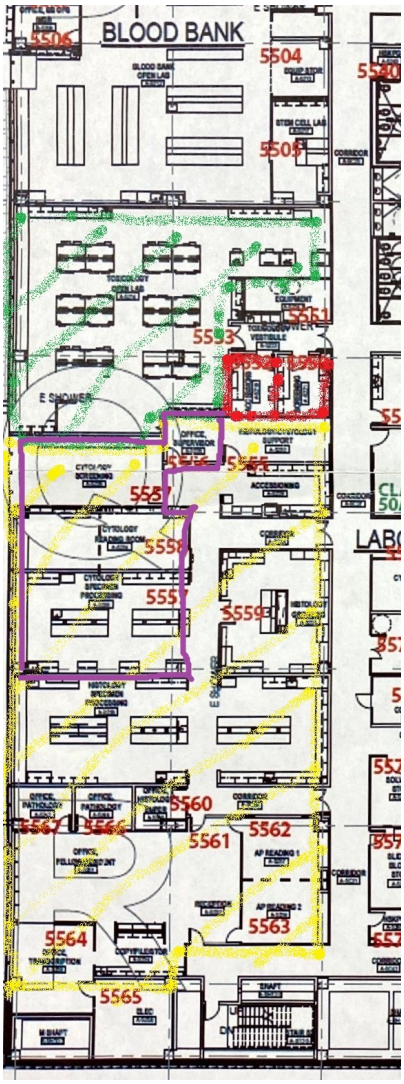
We are fortunate to have the opportunity to contribute our services to the Cancer Center as well as provide the best quality images to compliment our teaching efforts.

Renovations Scheduled For UMC Anatomic Pathology

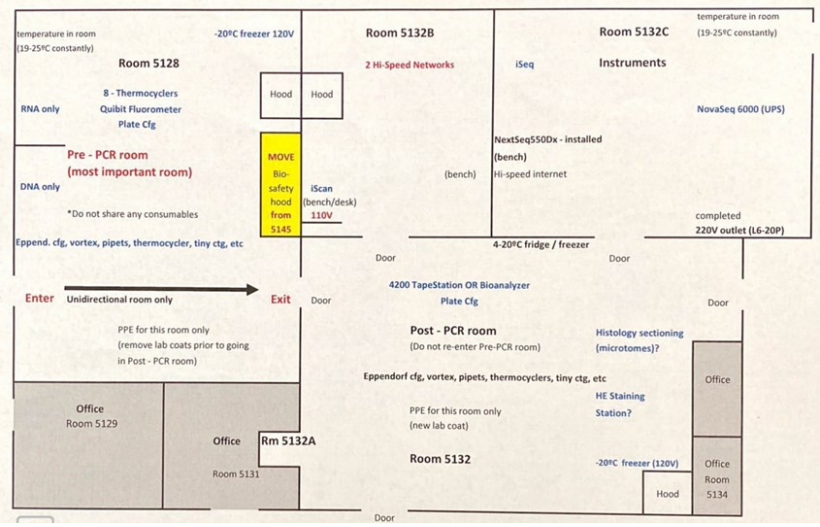
The move is on!

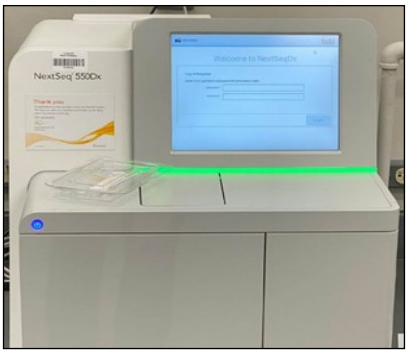
- Yellow encloses the existing Anatomic Pathology space at UMC.
- The cytology spaces (bordered in purple) will be relocated into the adjacent spaces delimited in green. The new spaces will enable customization for special cytology needs as the existing worktables are on wheels and can be moved readily.
- The two small laboratories in red will be renovated into Pathologist offices. Vacated space in Anatomic Pathology can be converted into needed laboratory processing space for IHC and other testing. Additional resident viewing stations can be located into this area.
- The entirety of the space in green will not be devoted to Anatomic Pathology as a small portion may be required for new clinical laboratory testing (T-spot testing may be processed in this area).

Pathologist and resident involvement is expected to produce optimum value from this move.



LSU Health Sciences Center Coronavirus Laboratory





The NextSeq 550 DX will soon perform coronavirus sequencing to detect variants.

Dr. Grace Athas checks function of the laminar flow hood on the QIAGEN QIAcube® also used for viral extraction.

The Tecan robot automatically extracts viral RNA from samples. Startup has been delayed by lack of plastics notably the deep-well plates.

In Fall 2019, the Pathology Department began discussions with the Genetics Department to bring Next Generation Sequencing (NGS) technologies to the clinical area of oncology for our hospitals. Fast forward to 2020 and the arrival of the COVID-19 virus to the U.S. and the state of Louisiana.

NGS technologies have revolutionized the genomics field and are becoming more commonplace for identification of human infectious diseases. The Illumina® COVIDSeq™ Test is a NGS in vitro diagnostic test on the Illumina NovaSeq 5000 Sequencing System intended for the qualitative detection of SARS-CoV-2 RNA from nasopharyngeal (NP) swabs, oropharyngeal (OP) swabs, anterior nasal swabs, mid-turbinate nasal swabs, nasopharyngeal wash/ aspirates, nasal aspirates, and bronchoalveolar lavage (BAL) specimens from individuals suspected of COVID-19 by their healthcare provider. Our laboratory is certified under the Clinical Laboratory Improvement Amendments of 1988 (CLIA), 42 U.S.C. §263a, to perform high complexity tests.

We are currently training on the Illumina system by utilizing previous samples that were analyzed by the Seegene PCR COVID-19 test. The next step will be validation using previously sequenced samples from other institutions to assure competency of our staff on these procedures.

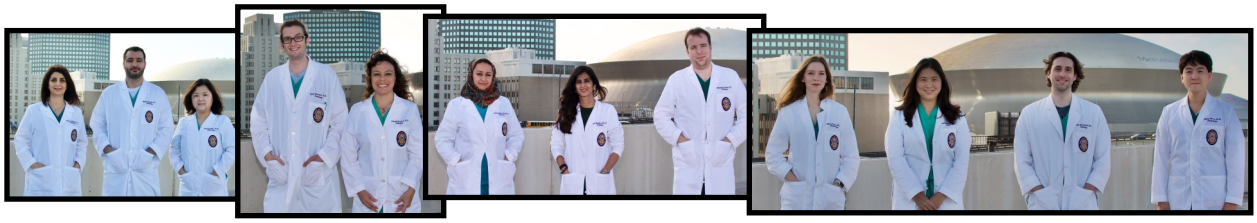
The LSUHSC Coronavirus Laboratory is located on the 5th floor of the Medical Education Building on the opposite side from the Pathology administrative offices. Gordon Love, MD is the CLIA Medical Director, Grace Athas, PhD, CLS, is the Operations Director, Lucio Miele, MD, PhD, and Judy Crabtree, PhD, are clinical consultants.

Pathologists/Residents Instrumental In COVID-19 Findings

University Medical Center-New Orleans, which is staffed by LSUHSC Pathologists, is one of the few hospitals in the United States that is equipped with an autopsy suite that meets CDC standards for performing autopsies of COVID-19 positive patients safely. LSUHSC Pathologists, Drs. Richard Vander Heide and Sharon Fox, lead the autopsy efforts and were assisted by our residents.

Their findings were reported on many local and national news stations, including Fox 8, WDSU and CNN. They were also featured in several articles in NOLA.com, CAP Today and The Washington Post. Visit the LSUHSC Pathology Department website to review their findings.

Meet the LSUHSC Pathology Residents

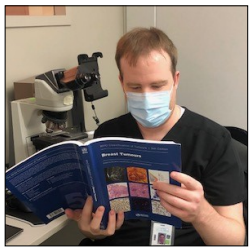


The LSUHSC Pathology Department is proud to announce our 12 residents: PGY 1 are Drs. Maryam Sadough, Zaid Khreefa, and Wenjing Qiu. PGY 2 are Drs. Jack Harbert and Fernanda da Silva Lameira. PGY 3 are Drs. Nibras Fakhri, Hina Khokhar, and Christopher Girardo. PGY 4 are Gloria Sura, Katherine Wang, Walter Beversdorf, and Bing Han.

Residents Accept Fellowships

Congratulations to 3rd year residents, Dr. Hina Khokhar and Dr. Nibras Fakhri, and to 4th year resident, Dr. Bing Han! Dr. Fakhri accepted a Hematopathology fellowship at the University of Miami in 2022. Dr. Fakhri accepted sequential fellowships at Methodist Houston in Cytopathology in 2022, and combined GU and Medical Renal Pathology in 2023, and Dr. Han accepted a Dermatopathology fellowship at Tulane University in 2022.

"Thank You" Alumni for your donations



On behalf of the Pathology residents, we would like to extend a special thank you to Dr. Gault Townsend for his book donations. Dr. Townsend donates valuable Pathology books to our residents every year. We would also like to thank Dr. Don Deshotel's family for graciously donating microscopes for our residents.

Your donations go a long way in supporting our mission. Monetary donations are also welcome by visiting the LSUHSC Foundation at https://give.lsuhealthfoundation.org/givenow.

Dr. Bing Han Named Resident of the Quarter

Dr. Han poses for a photo with Pathology Chair, Dr. Gordon Love, and Residency Program Director, Dr. Ritu Bhalla.

Congratulations to our 2019-2020 Chief Resident , Dr. Bing Han, who was selected as University Medical Center's Resident of the Quarter for the 4th quarter of 2020! Dr. Han was selected for continuously demonstrating compassion, respect, integrity and teamwork.

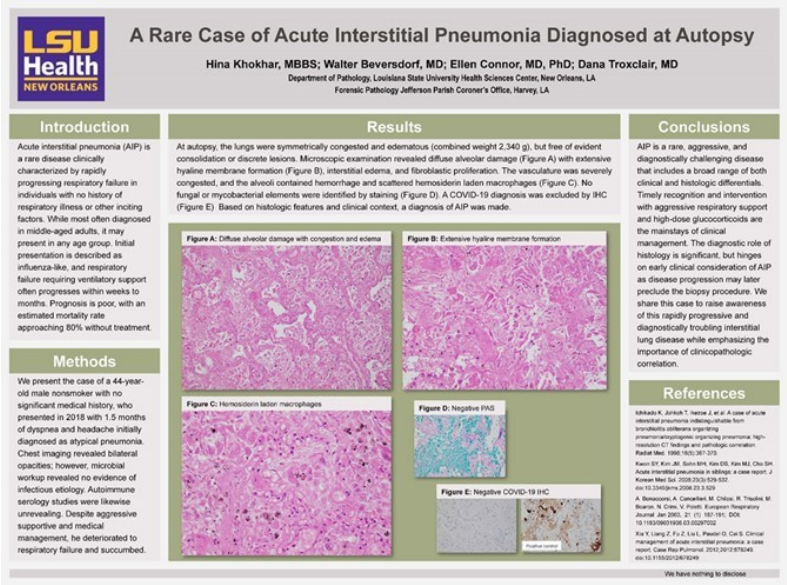
We are proud of Dr. Han and his dedication to pathology and patient care.

2021 Chief Residents Announced

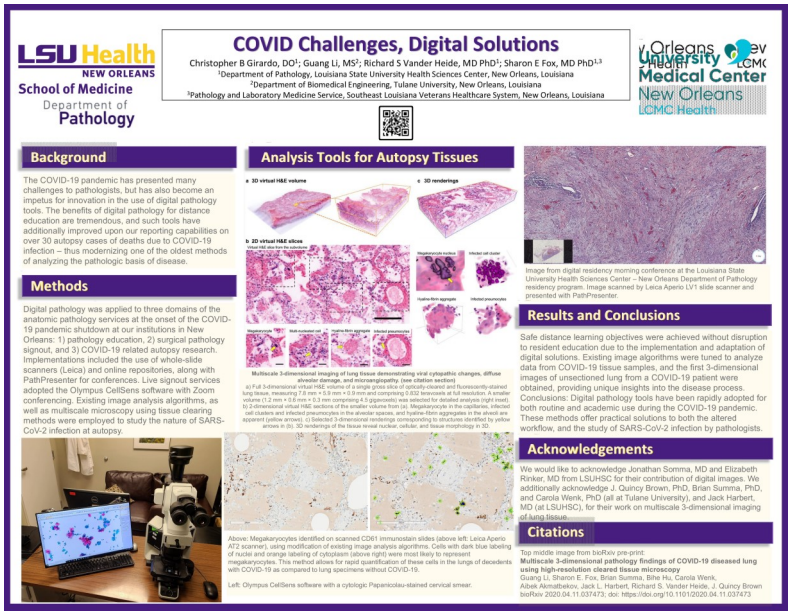
We are pleased to announce our Chief Residents for 2021, Dr. Chris Girardo and Dr. Hina Khokhar. We are excited to have them lead our residents into the 2021-2022 academic year. We thank our outgoing Chiefs, Drs. Bing Han and Gloria Sura for their past leadership.

Residents' Posters Awarded At Conferences

Drs. Hina Khokhar and Walter Beversdorf were selected as a blue ribbon finalist in the American Society of Clinical Pathologist's resident category. Their poster was titled "A Rare Case of Interstitial Pneumonia Diagnosed at Autopsy."



Dr. Chris Girardo was awarded the Best Education Poster at Pathology Visions 2020. The topic of his presentation was "COVID Challenges, Digital Solutions."



Dr. Nibras Fakhri will receive the first prize Jerome Smith plaque for infectious disease posters at USCAP from the Binford-Dammin Society for Infectious Disease Pathologists for her presentation, "Diagnostic Accuracy of Histochemical Stain in Identification of Mucormycetes."

Two Medical Technologists Join The LSUHSC Pathology Department

We are pleased to welcome two Medical Technologists, Darlene Tauzier and Elizabeth Gravois, who will work in the Precision Medicine Lab.

Darlene is busy processing samples.

Darlene has over 23 years of molecular testing experience. She graduated from LSU Health New Orleans School of Allied Health, and is registered in the State of Louisiana and ASCP certified. She worked at Charity Hospital from 1997 until it closed. Then she transferred to University Medical Center—New Orleans.

Liz has over eight years of experience, including experience in PCR and real time PCR typing. Liz is also a graduate of the LSU Health New Orleans School of Allied Health, and is Louisiana State registered and ASCP certified. She most recently worked at University Medical Center—New Orleans and Tulane University.

Bridge Over Tulane Expected In 2022

The Dean's Office has announced that construction of a bridge that will cross over Tulane Avenue connecting the LSU Health Sciences Center to University Medical Center - New Orleans has begun. You can see the supports that have been erected on the UMC side of Tulane.

The open air bridge will connect the LSUHSC Walk to Wellness at South Prieur Street to the UMC Parking Garage. It is scheduled to be completed by the end of 2022. When completed, our faculty, residents and staff will have easier access to Pathology offices and resources in the Medical Education Building.

Published Articles

- Fox SE, Akmatbekov A, Harbert JL, Li G, Brown JQ, Vander Heide RS. Pulmonary and cardiac pathology in African American patients with COVID-19: an autopsy series from New Orleans. The Lancet Respiratory Medicine, 8(7): 681-686. (2020). https://doi.org/10.1016/S2213-2600(20)30243-5
- Frequently cited pre-print: Fox SE, Akmatbekov A, Harbert JL, Li G, Brown JQ, Vander Heide RS. Pulmonary and Cardiac Pathology in Covid-19: The First Autopsy Series from New Orleans. https://www.medrxiv.org/content/10.1101/2020.04.06.20050575v1 doi: https://doi.org/10.1101/2020.04.06.20050575
- Fox SE, Li G, Akmatbekov A, Harbert JL, Lameira FS, Brown JQ, Vander Heide RS. Unexpected Features of Cardiac Pathology in Covid-19 Infection. Circulation,142:1123–1125 (2020). https://doi.org/10.1161/CIRCULATIONAHA.120.049465
- Fox SE, Lameira FS, Rinker EB, Vander Heide RS. Cardiac Endotheliitis and Multisystem Inflammatory Syndrome after Covid-19. Annals of Internal Medicine, ePub ahead of print, July 29, 2020. https://doi.org/10.7326/L20-0882
- Bing Han, MBBS; Ritu Bhalla, MD; Fernanda da Silva Lameira, MD; Richard Stuart Vander Heide, MD, PhD, MBA; Gordon Lee Love, MD. Coronavirus Disease 2019 Autopsies and Personal Protective Equipment. Arch Pathol Lab Med. 2020 Nov 1;144(11):1295a-1295.doi:https://pubmed.ncbi.nlm.nih.gov/32520590
- Han B, Bhalla R, Lameira F, Vander Heide R, Love G. COVID-19 Autopsies and Personal Protective Equipment. Letter to editor. Archives of Pathology and Laboratory Medicine. PMID: 32520590 DOI: 10.5858/arpa.2020-0341-LE
- Cutaneous leishmaniasis in Louisiana - one-year follow-up: A case report. Azhar A, Connel HEl, Haas C, Surla J, Reed D, Kamboj S, Love GL and Bennani Y. World Journal of Clinical Infectious Diseases. Accepted Date: 2020-10-26. In press
- Elham Yousefi, Gloria H Sura, Jonathan Somma. The gray zone of thyroid nodules: Using a nomogram to provide malignancy risk assessment and guide patient management. Cancer Med. Online ahead of Print. 2021 Mar 24. https://doi: 10.1002/cam4.3866
- Bing Han, Caroline Alquist. Amber-colored Plasma in Therapeutic Plasma Exchange. https://academic.oup.com/cid/article-abstract/72/3/519/6125775?redirectedFrom=fulltext
- Rodriguez, F. "Clinical Laboratory Professionals: It Starts With You", Critical Values 14(2)(April 2021): 6-7