Pathology and Laboratory Medicine

Division Photo

Seated: Paul Steele MD, David Witte MD, Kevin Bove MD; Standing: Kathryn Wikenheiser-Brokamp MD PhD, Jerzy Stanek MD, Peter Tang PhD, Margaret Collins MD, Todd Boyd MD, Richard McMasters MD, Michael Miles PharmD, Julie Yin MD, Lili Miles MD, Joel Mortensen PhD, Jun Mo MD; Absent: Anita Gupta MD, Keith Stringer MD.

Division Data Summary

<table>
<thead>
<tr>
<th>Research and Training Details</th>
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<tbody>
<tr>
<td>Number of Faculty</td>
<td>17</td>
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<tr>
<td>Direct Annual Grant Support</td>
<td>$844,671</td>
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<tr>
<td>Direct Annual Industry Support</td>
<td>$105,510</td>
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<tr>
<td>Peer Reviewed Publications</td>
<td>28</td>
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<table>
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<tr>
<th>Clinical Activities and Training</th>
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<tr>
<td>Number of Clinical Fellows</td>
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<tr>
<td>Inpatient Encounters</td>
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<td>Outpatient Encounters</td>
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Division Collaboration

Collaboration with Gastroenterology, Hepatology and Nutrition
Collaborating Faculty: Mitch Cohen MD; Jorge Bezerra MD; Xiaonan Han PhD; Noah Shroyer PhD
DigestiveHealthCenter. Integrated morphology core lab, provides technical and professional support to members of the DHC involved in basic and translational research in gastrointestinal tract.

Collaboration with Gastroenterology, Hepatology and Nutrition
Collaborating Faculty: James Heubi MD; John Bucuvalas MD; Jorge Bezerra MD; Kathleen Campbell MD
Director of Pathology  Core for multicenter BARC and CLIC studies on biliary atresia and other chronic liver disorders in children.

Collaboration with Division of Immunobiology
Collaborating Faculty: Marsha Wills-Karp PhD; Fred Finkelman PhD
Morphology core lab, provides technical and professional support for PPG focused on IL13.
Collaboration with Division of Allergy and Immunology

Collaborating Faculty: Marc Rothenberg MD; Pablo Abonia Md

Providing professional support for the Cincinnati Center for Eosinophilic Disorders program and related research.

Collaboration with Division of Hematology/Oncology

Collaborating Faculty: Maryam Fouladi MD; Richard Drissi PhD

Providing pathology professional and technical support for multicenter referral service for the High Grade Glioma program and basic research program.

Collaboration with Division of Heme/Onc Research

Collaborating Faculty: Yi Zheng Ph.D.; James Mulloy PhD; Jose Cancelas MD, PhD

Joint development of Leukemia Biology program at CCHMC.

Collaboration with Department of Surgery and Division of Heme/Onc

Collaborating Faculty: Denise Adams MD; Richard Azizkhan MD; Anusua Dasgupta MD

Hemangioma/Vascular malformation clinical program. Providing professional diagnostic and technical pathology support for multidisciplinary patient care program.

Faculty Members

David Witte, MD, Professor; Division Director
Kevin E Bove, MD, Professor
J. Todd Boyd, DO, Assistant Professor
Margaret H Collins, MD, Professor
Anita Gupta, MD, Assistant Professor
Richard L McMasters, MD, Assistant Professor
Lili Miles, MD, Associate Professor
Michael Miles, PharmD, Professor Clinical
Jun Q Mo, MD, Assistant Professor
Joel E Mortensen, PhD, Associate Professor
Kenneth D Setchell, PhD, Professor
Jerzy W Stanek, MD, Professor
Paul E Steele, MD, Associate Professor
Keith F Stringer, MD, Assistant Professor
Peter Tang, PhD, Assistant Professor
Kathryn Wikenheiser-Brokamp, MD, Assistant Professor
Hong Yin, MD, Assistant Professor

Trainees

Rachel Sheridan, MD, PGY-V, University of Cincinnati
Md Khalequzzaman, MD, PGY-V, Howard University Hospital

Significant Accomplishments

Combined Programs

CCHMC is a nationally recognized center for diagnostic evaluation and management of children with severe liver disease. The Division of Gastroenterology and Nutrition has a strong clinical program that requires a multidisciplinary approach to evaluation and treatment of these patients. Pathology and Laboratory Medicine is an active member of this program both in clinical management and research programs contributing to the understanding of pediatric liver disease. Expertise and unique diagnostic lab services is provided by the Mass Spectrometry core facility of Dr. Setchell and the anatomic path service has a longstanding collaborative relationship with the GI service and Dr. Setchell in supporting the Liver Center. CCHMC was a participant in two NIH funded multicenter pediatric liver disease programs: the Biliary Atresia Research Consortium and Cholestatic Liver Disease Consortium, committed to providing centralized resources for collecting and making available specimens for research studies on pediatric liver diseases. Dr. Kevin Bove is chair of the Pathology core for both consortiums and the histopath core lab is based here. Funding for these programs was renewed
Pleuropulmonary Blastoma (PPB)

Pleuropulmonary blastoma (PPB) is a pediatric lung sarcoma that arises during fetal development. PPB is characterized by epithelial lined cysts and uncommitted mesenchymal cells that eventually overgrow the cysts to form solid high grade sarcomas. PPB is part of an inherited cancer syndrome and therefore the molecular events predisposing to PPB are likely relevant to other pediatric malignancies. Dr. Katherine Wikenheiser-Brokamp (Pathology) and her colleague Dr. Ashley Hill MD (Children’s National Medical Center, Washington DC) identified germline loss of function DICER1 mutations in ten PPB families. Preliminary data demonstrate that Dicer1 protein is specifically lost in the PPB associated epithelium but not in the malignant mesenchymal component. They propose to generate a conditional Dicer1 deficient mouse model and to identify the developmental stages wherein Dicer1 function is required. These studies will elucidate the role of Dicer1 in lung development, and result in a clinically relevant, manipulatable model critical for elucidating molecular events underlying PPB pathogenesis.

Oncology Hematology Care (OHC) Contract/ Clinical Lab LIS Upgrade

During the past year CCHMC has contracted with Oncology Hematology Care (OHC) to provide all the lab support for their clinical office practice. OHC is a group of 20 medical offices, providing most of the adult oncology services in the Greater Cincinnati Area, with more than 250,000 patient encounters a year. It represents a joint venture involving the Division of Pathology and Lab Med, Hematology Oncology, and Human Genetics. A centralized but separate processing facility has been established at the Oak campus to process a projected 250,000 samples per year from this large practice group. During the past year, the Clinical Lab has also totally rebuilt and upgraded its Laboratory Informatic System. The Cerner Millennium system has replaced the previous system which had been in use for the past 21 years. This system offers not only better speed and efficiency in work flow, but also will support many new capabilities not previously available to the CCHMC. This will include a new advanced system for detailed reporting on line of genetic tests, offers not only better speed and efficiency in workflow, but also will support many new capabilities not previously available to the CCHMC. This includes a new advanced system for detailed reporting on line of genetic tests, cytogentic, and flow cytometry testing, as well as on line documentation of procedural steps to support each of those areas, reducing paper documentation. It will also provide new tools for more real time monitoring of workflow, QA, and turnaround times. More and improved management reports emanate from this system, including review queues for lab results that need supervisory and director-level sign-off or scrutiny. Bar coded processing of samples is also being implemented to improve efficiency and patient safety. Autoverification and enhanced use of rules is planned for this system. This system will provide better access to clinical data for clinical studies. Other changes in the clinical lab include renewal of the processing area to further enhance Lean Process changes, addition of a new Ortho ViTsos Fusion chemistry analyzer, to provide a mirror backup instrument for the highest volume analyzer in the lab.

Division Publications


Grants, Contracts, and Industry Agreements

Grant and Contract Awards

Annual Direct / Project Period Direct

Soy Isoflavone Metabolite Equol- Its Formation and Fate
### National Institutes of Health

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<thead>
<tr>
<th>Project Title</th>
<th>Principal Investigator</th>
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<th>End Date</th>
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### Industry Contracts

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<td>Mortensen</td>
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Current Year Direct Receipts: $105,510
Total: $950,181