Letter from the Chairman

It is a pleasure to introduce our inaugural Department of Pathology Newsletter. The purpose of this initiative is to open a communication channel to share important news across all mission areas of our Department (clinical, research, education). Since often information gets lost amidst noise, we hope this initiative will make everyone aware of our activities, help us celebrate our accomplishments, and promote new collaborations. If you ask me what happened in our Department in the last few months, lots of exciting things come to my mind. These are only a few of them.

In the last few months, we have been able to recruit to our faculty a cadre of highly talented pathologists, Drs. Deborah Delair, Kyung Park, Paolo Cotzia, Odise Cenaj, whose impressive diagnostic and research skills will further strengthen our clinical practice. On the research side, we were lucky to recruit Dr. Shruti Naik, a gifted young
immunologist with interests in inflammation, host-microbe interactions, as well as autoimmune and tumorigenic skin conditions. All these recent additions to our Department further consolidate our focus on human disease and the mechanisms behind it.

Another remarkable success is a landmark publication on the ability of machine learning to improve the classification and mutational prediction of human lung cancer, published last month at Nature Medicine. This effort was spearheaded by Dr. Aristotelis Tsirigos and one of our residents, Dr. Paolo Santiago Ocampo, and supported by several faculty members, including Drs. Matija Snuderl, Navneet Narula and Andre Moreira. Artificial intelligence (AI) is being applied to multiple areas of health and research across medical centers, and our Department is well positioned to lead this effort. I encourage you to learn more about this article in the “Research Highlights” in this issue.

In our Molecular Pathology lab, Dr. Matija Snuderl, Dr. George Jour and their team, have optimized, validated and received approval for a panoply of tests, including a large cancer gene mutation panel (NYU NGS580), and a smaller panel (NYU Oncomine Focus NGS assay) launched in early November. These are powerful tools that will help fulfill the promise of personalized diagnosis and treatment for cancer patients at NYULH, and significantly improve patient outcomes. Several new molecular pathology faculty members (Delair, Park, Cotzia) have joined the laboratory, adding their expertise, sub-specialization and experience. We aim to place the Molecular Pathology lab at the core of NYULH, eventually extending its services beyond cancer detection to other disease areas, including cardiology, neurology and microbiology.

I would like to take a moment to reflect on another significant ongoing event, the interviewing of our next pathology residence class. This is a process of vital importance for us because the future of every organization relies on the quality of the next generation, and in our case, on our trainees and young faculty. So far, we have had an outstanding crop of candidates and a large number of faculty involved in the interview process. I would like to thank them for their contributions and reassure you that we will double our efforts to attract the best future pathology residents.

I am confident that this Newsletter initiative will be a success! To ensure that, please feel free to share with us any relevant honors, awards, publications and achievements and send us feedback and suggestions. I hope you enjoy exploring this issue!

Best,

Iannis Aifantis, PhD
Chair, Department of Pathology

Research Highlights

Microglandular Adenosis is an advanced precursor breast lesion with evidence of molecular progression to matrix-producing metaplastic carcinoma.

Christopher J. Schwartz, Igor Dolgalev, Esther Yoon, Iman Osman, Adriana Heguy, Eleazar Vega-Saenz de Miera, Diana Nimeh, George Jour, Farbod Darvishian
Human Pathology, 2018, ISSN 0046-8177, https://doi.org/10.1016/j.humpath.2018.10.021

Classification and mutation prediction from non-small cell lung cancer histopathology images using deep
Learning

STIM1 and STIM2 Mediate Cancer-Induced Inflammation in T Cell Acute Lymphoblastic Leukemia

Featured Publication
Classification and mutation prediction from non-small cell lung cancer histopathology images using deep learning.

Aristotelis Tsirigos, PhD | Nicolas Coudray, Research Scientist | Paolo Santiago Ocampo, MD, PhD
Visual inspection of glass slides continues to serve as the first and most important task performed by pathologists in order to make a diagnosis of cancer. This step is crucial as it determines the proceeding molecular tests used to better characterize the tumor, which in turn guides selection of the most appropriate treatment for each patient.

**Academic Achievements**

**Grants**

- **Iannis Aifantis**
  - NIH R01
  - 11/1/2018
  - *Mechanisms of enhancer regulation in leukemia - Resubmission - 1*

**Career Awards**

- **Praveen Agrawal**
  - Harry J. Lloyd Charitable Tru
  - 8/8/2018
  - *Glycosylation as a Regulator of Tropism of Melanoma Metastasis*

**Research Fellowship**

- **Oriana Perez**
  - NIH-F32
  - 7/26/2018
  - *Dynamic Spatiotemporal Analysis of Immune Cells in the Tumor Microenvironment*

**Spotlights**
Vlad Sviderskiy, an MD/PhD student at NYU School of Medicine’s member of Posseamto lab had a rare opportunity this summer to expand his scientific horizons by attending a prestigious meeting aimed at connecting Nobel...

View More >>

Christopher Park, MD, PhD, Director of the TRP

Translational Research Program (TRP) started a Work in Progress seminar series (TRP-WIP) where Awardees have the opportunity to present their current, ongoing work and receive valuable feedback from their colleagues. The conference takes place the 3rd Friday of the month. The program funds selected research projects proposed by Pathology Residents and Fellows; all proposals are sponsored by a faculty member in the Department of Pathology. The mission of the TRP is to promote the research and educational mission of the Department of Pathology by providing financial, intellectual, and human resources to facilitate clinically relevant, high-impact research.

View More >>
Who is New

Kleopatra Avrampou
Research Technician
Aifantis Lab

Brandon Hsieh
Research Technician,
Naik Lab

Theodoros Sakellaropoulos
Postdoctoral Fellow
Aifantis/Skok Lab

View More >>
Upcoming Events

Ion Channels & Immunity Symposium 2018
December 3rd, 2018 - Smilow Seminar Room, 7:30am-7:30pm

Dr. Ruth Nussenzweig Memorial Lecture
1/30/19
Alumni Hall B, 9-2pm

USCAP Conference
March 16-21, 2019 at Gaylord National Resort & Convention
Click here to see NYU Department Pathology abstracts and oral presentations that have been accepted for the 2019 USCAP conference.

Upcoming Funds Opportunity

<table>
<thead>
<tr>
<th>LOI Date</th>
<th>Application Deadline</th>
<th>New</th>
<th>Weblink</th>
<th>Funder</th>
<th>Field</th>
<th>Disease Type</th>
<th>Technique</th>
</tr>
</thead>
<tbody>
<tr>
<td>##########</td>
<td>2019-04-00</td>
<td>New</td>
<td><a href="http://www.afar.org/research/fund">http://www.afar.org/research/fund</a></td>
<td>The Glenn Foundation for Medical Research*</td>
<td>Disease Biology* Neurobiology and Mental Health</td>
<td>Aging Associated Diseases</td>
<td></td>
</tr>
</tbody>
</table>

View More >>

Suggested by You

Vast Leukemia Dataset Could Help Researchers Match Therapies to Patients
From HHMI

Cultivating the Human Dimension in Research.
Antes AL, DuBois JM. Mol Cell. 2018 Oct 18
The scientist free webinar series:
**The Biomarker Bottleneck in Immuno-oncology: Understanding to Overcome**

**Human Cognition and the AI Revolution**
Thursday, December 6, 2018, 7:00 PM - 8:30 PM

For more interesting events organized by NYAS go to [https://www.nyas.org/](https://www.nyas.org/).

**AACR Annual Meeting 2019**
March 29 - Apr 3, 2019, Atlanta, GA

**3rd Scientific Workshop on Haematological Tumour Microenvironment and its Therapeutic Targeting**
February 24 - February 26, 2019 - London, United Kingdom

**Mitochondrial Dynamics and Signaling**
March 17 - 22, 2019, Ventura, CA

[Click here](#) to find out about other Gordon Conferences.

**Mitochondria: From Basic Biology to Mechanisms of Disease Conference**
27 Feb 2019 - 02 Mar 2019, Nassau, Bahamas

---

**Alumni News**
Panagiotis Ntziachristos  
Northwestern University, Assistant Professor  
https://www.ntziachristoslab.com/

Q: When did you leave the Aifantis lab/start your new position:  
A: In September of 2015  
Q: How did you get where you are today and how did the experience in the pathology department and Iannis lab help you get there:  
A: The Pathology Department and the Aifantis lab form a nurturing environment that fosters collaboration, creativity and innovation. This was the proper place for me to improve scientifically and develop towards becoming an independent investigator.

Guang-Yu Yang, MD, PhD  
Joseph C. Calandra Research Professor in Pathology and Toxicology  
Vice Chair and Medical Director of Anatomic and Surgical Pathology  
Department of Pathology  
Northwestern University Feinberg School of Medicine

Q: Current institution & title:  
A: Northwestern University Feinberg School of Medicine / Joseph C. Calandra Research Professor in Pathology and Toxicology and Vice Chair and Medical Director of Anatomic Pathology  
Q: When did you leave NYU/start your new position:  
A: Fellowship in GI/Liver pathology (2004 – 2005) at Johns Hopkins Hospital following my residency at NYU; I started at Northwestern in July 2005 as an associate professor in pathology
We Want to Hear from You

We would like to feature your stories in the upcoming Newsletter. Please send us your research Achievements: published articles, abstracts, presentations and awards. News, ideas and feedback are always encouraged and can be sent to caterina.berti@nyulangone.org

Who We Are

Meet the Team