

## *Biomedical Informatics Grand Rounds* Wednesday, March 10, 2021 3:00 pm – 4:00 pm

## The Informatics of COVID-19: A New York Perspective

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Bio: James Crawford received his MD and PhD degrees from Duke University (1983), trained in Anatomic Pathology and Gastrointestinal Pathology at Brigham and Women's Hospital (1983-1987), and in Hepatic Pathology at the Royal Free Hospital, London, UK (1989). While on faculty at Brigham and Women's Hospital/Harvard Medical School (1988-1996) and at Yale University (1997-1999), his major investigative work was in hepatic formation of bile, with particular attention to hepatocellular secretion of bilirubin, bile salts, and phospholipids. Although continuing his research in hepatic pathobiology and pathology as Chair of Pathology and Laboratory Medicine at the University of Florida (1999-2008), Dr. Crawford also became a leading proponent for the role of pathology and the clinical laboratory in patient-centered care and population health. Upon taking his current position at Northwell Health (2009-present), this leadership extended to the advocating for the role of the clinical laboratory in value-based care, ultimately leading to co-founding the Project Santa Fe Foundation (PSFF) in 2016, originator of the Clinical Lab 2.0 paradigm. As Chair of the Board of Directors for PSFF, he is a leader in the effort to develop the value statements for laboratory diagnostic services in the next era of health care. He currently is Editor-in-Chief of Academic Pathology, the official journal of the Association of Pathology Chairs (APC), and has previously served as President of the APC, Editor-in-Chief of Laboratory Investigation, as Chair of the Council of Academic Societies of the Association of American Medical Colleges (AAMC), and on the AAMC Board of Directors. This past year, Dr. Crawford has been heavily involved in the New York regional response to the COVID-19 pandemic, including moderating the "New York State SARS-CoV-2 Testing Consortium", comprising the leadership of the clinical laboratories of 12 New York State academic medical centers.

Abstract: Since March 2020, more than 100,000 publications on the topic of [COVID-19]/[SARS-CoV-2] are listed in PubMed; new publications are coming out at approximately 3,000 per week. By comparison, with a 38-year head-start, [Human Immunodeficiency Virus]/[HIV] has not yet reached 400,000 publications. The question at hand is: what information is required to understand the contagion that is SARS-CoV-2? The domains include Investigational Science into viral biology and the host response; Medical Science regarding COVID-19 disease and treatment; and information for Public Health and our Society. Recognizing that no one individual can adequately represent the information now available regarding COVID-19 and the virus that is SARS-CoV-2, a regional perspective will be given for the Informatics journey we have traveled. Immediate conclusions include: (1) the Informatics of Epidemiology must be activated immediately upon entry of a new pathogen into a region, with as much granularity as possible to inform the Public Health response; (2) the medical community must activate immediately to assimilate and disseminate information about the pathogen's impact on the human condition; and (3) worldwide communities of investigational science must activate immediately, both in pursuit of therapeutics based on scientific knowledge of the pathogen and host, and in support of mitigation of the pandemic. While these conclusions may seem self-evident, the natural experiment that is COVID-19, and the information obtained over the course of this pandemic, provide insights into both our strengths and weaknesses as an information-based society.

Educational Objects: Upon completion, participants should be able to:

- To understand the contribution that the New York regional community made to world knowledge about COVID-19.
- To examine the Informatics required to achieve new knowledge about COVID-19.
- To consider our societal needs for acquiring and managing pandemic information moving forward.

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