Malcolm Whitman, PhD, professor of Developmental Biology, and Interim Dean for Research, received a Supplemental Award from NIH’s National Institute of Arthritis and Musculoskeletal and Skin Diseases for his R01 entitled, “Role of the First Secreted Tyrosine Kinase in Bone Development, Homeostasis, and Repair.”

Diseases associated with pathological changes of the extracellular matrix have a tremendous impact on the quality of life and well-being for all individuals. In the skeleton, these changes may include reduced bone density with age, osteoarthritis, and increased bone remodeling during tumor metastasis. The Whitman Lab has identified a new mechanism for the regulation of proteins that control bone and cartilage matrix homeostasis, with substantial implications for new therapeutic approaches to skeletal disease. These studies will define a novel mechanism for the regulation of the extracellular matrix function in bone, providing a new approach to the therapeutic modulation of skeletal development, homeostasis, and repair.

Yingzi Yang, PhD, professor of Developmental Biology, received an R01 Award from NIH’s National Cancer Institute entitled, “Cellular and Molecular Mechanism of Hippo Signaling in Suppressing Liver Tumor Formation.”

Recent studies have expanded the concept that inflammation is a critical component of tumor progression. Therefore, there is an urgent need to better understand cancer-immune interactions, particularly under specific contexts of cells, tissues and deficient molecular pathways involved. Human hepatocellular carcinoma (HCC), a primary malignancy of the liver and the second-leading cause of cancer mortality worldwide is an example of inflammation-induced cancer.

The Hippo signaling pathway which the Yang Lab plays a critical role, has recently emerged as a major oncosuppressive pathway and play critical roles inhibiting hepatocyte proliferation, survival, and HCC formation. The goal of this study is to determine a previously unknown functional mechanism by which Hippo signaling in hepatocytes attenuates hepatocarcinogenesis by inhibiting macrophage infiltration and TAM differentiation. The Yang Lab has identified two secreted effectors of Hippo signaling in hepatocytes, each of which partially mediates Hippo effects in restricting inflammatory response and tumor growth.

Yang hypothesizes that a previously unknown function of Hippo signaling in hepatocytes is to regulate pro-tumor immune response by at least partially inhibiting Mcp1 and Jag1 expression. The knowledge gained from this project will establish a solid new foundation for further mechanistic investigation of hepatic Hippo signaling in inducing inflammation, tumor microenvironment remodeling, and provide new targets and strategies to treat HCC.

The Yang Lab includes the following postdoctoral research fellows: Drs. Qian Cong, Yuchen Liu, Emily Moore, Xiaohui Wang, Prem Yadav, and Miao Zhang. Additional Lab members include: visiting postgraduate research fellow, Dr. Xiaolei Zhang; and visiting graduate students, Drs. Shuhao Feng, Bo Gao, and Taifeng Zhou; as well as summer intern Anna Li, and research assistant, Yaxing Zhou.
New Postdoctoral Fellows

Rocio Fuente Perez, MS, PhD,
joined the Ionescu Lab as a postdoctoral research fellow in the Department of Developmental Biology. Fuente Perez received a master’s degree in biomedicine and molecular oncology from the University of Oviedo. She completed her PhD in biomedicine in Fernando Santos Laboratory in the Pediatric Research Group at the University of Oviedo, Spain, and Allan Bradley Laboratory in the Mouse Genomics Group at the Welcome Trust Sanger Institute, Cambridge, United Kingdom. Fuente Perez’s previous research involved the study of growth plate development in children with kidney disease using several animal models. In the Ionescu Lab, Fuente Perez will focus on the molecular mechanism that govern the articular cartilage hypertrophy and osteoarthritis evolution.

Kaho Ogawa, DDS, joined the Nagai Lab as a postdoctoral research fellow in the Department of Restorative Dentistry and Biomaterials Sciences. Ogawa comes from Japan and received her dental degree from Iwate Medical University. In the Nagai Lab, she is working on studying the comprehensive assessment of Japanese universal health coverage system, focusing on the reform of the dental insurance system. Ogawa is also working on the statistical analysis of the relationship between oral health and cognitive health.

HSDM/Forsyth Chalk Talks

September 25, 2018
12-1pm @ The Forsyth Institute
Vicki Rosen, PhD
Professor and Chair of Developmental Biology

October 19, 2018
12-1pm @ HSDM
Xiaozhe Han, DDS, MSc, PhD
Associate Member of the Staff, Forsyth; Lecturer in Oral Medicine, Infection, and Immunity

November 9, 2018
12-1pm @ The Forsyth Institute
Satya Kota, PhD
Instructor on Oral Medicine, Infection, and Immunity

December 14, 2018
12-1pm @ HSDM
Floyd Dewhirst, DDS, PhD
Senior Member of the Staff, Forsyth; Professor of Oral Medicine, Infection, and Immunity

HSDM Publications

DEVELOPMENTAL BIOLOGY
Giddon D, Assael L. For preventive medicine to include oral health care, the dental profession, licensing agencies, payers, and the public must effect change. Preventive Medicine 2018;114:200-204.


**ORAL AND MAXILLOFACIAL SURGERY**


**ORAL HEALTH POLICY AND EPIDEMIOLOGY**


**RESTORATIVE DENTISTRY AND BIOMATERIALS SCIENCES**


**MULTI-DEPARTMENTAL**


Brian Swann, Awarded Dean’s Community Service Award for Wampanoag Tribe Work

Brian J. Swann, DDS, recently promoted assistant professor of Oral Health Policy and Epidemiology, was awarded a 2018 Dean’s Community Service Award for his work with the Wampanoag Tribe Oral Health Relief Effort. Since 2013, Swann has led efforts to bring sustainable, comprehensive, family-centered oral health care to the underserved native population on Martha’s Vineyard. He has built lasting relationships within the Tribe, as well as mentored numerous students who have traveled with him to Martha’s Vineyard to work with the population and learn first-hand the importance of public health dentistry, and culturally-sensitive care. Swann graduated from the University of California San Francisco, School of Dentistry. After a 30-year career in public health and private practice, he realized he would make a greater impact by focusing on community dentistry and public health policy. This decision led him to Boston as the first Joseph L. Henry Fellow in Minority Health Policy. He earned certificates in Minority Health Policy from Harvard Medical School, and Oral Health Policy and Epidemiology from HSDM.

Hiroe Ohyama Completes HMS Academy Medical Education Fellowship

Hiroe Ohyama, DDS, MMSc, PhD, DMD, assistant professor of Restorative Dentistry and Biomaterials Sciences, successfully completed the HMS Academy Medical Education Fellowship. Ohyama published two papers during the Fellowship period. The HMS Academy Medical Education Fellowship provides educators with dedicated time to develop the expertise and skills needed to advance academic careers in medical education research. The Director of the HMS Academy Medical Education Fellowship, David Hirsh, MD, is photographed with Ohyama.

Francesca Gori, Named Program Director of the HSDM Forsyth Research Academy

Francesca Gori, PhD, assistant professor of Oral Medicine, Infection and Immunity at HSDM, has been named Program Director for the HSDM Forsyth Research Academy. The Research Academy is a three-year structured Doctor of Medical Sciences (DMSc-only), research-intensive degree in oral biology. Under the mentorship of world-renowned scientists, participants undertake an intensive research training experience in laboratories at HSDM or Forsyth. The goal of the program is to train academic researchers in oral and craniofacial biology and skeletogenesis in the best possible scientific environment, and thus provide superior research leadership to institutions and countries around the globe. The Oversight Committee includes: Francesca Gori, PhD (Director); Yingzi Yang, PhD; Thomas Van Dyke, DDS, PhD; and, Alpdogan Kantarci, DDS, MSc, PhD.

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