

### **MISSION OF OUR OFFICE**

The mission of the NYU Office of Industrial Liaison is to promote the commercial development of NYU technologies into products to benefit the public, while providing a return to the University to support its research, education, and patient care missions. The Office also facilitates research collaborations between NYU researchers and industry on projects of mutual interest.

### **TECHNOLOGY COMMERCIALIZATION SUCCESSES**

NYU has a commitment to translational research and a strong track record in seeing its discoveries successfully commercialized to benefit the public. More than 20 biomedical products have come to market based on NYU technologies, including drugs to treat cancers, rheumatoid arthritis, and psoriasis, and diagnostics to help guide HIV therapy, as well as MRI technology, orthopaedic and dental implants, stent technology, monitoring equipment, ventilation devices for sleep apnea, and other device technologies. Numerous additional products are in clinical trials by NYU licensees, including drugs for cancers, heart disease, Alzheimer's Disease, Parkinson's Disease, diabetic complications, malaria, and addiction. Agricultural technologies to improve crop yields for food and biofuels also have been commercially developed, as have numerous electronics and software technologies.

### CULTURE OF ENTEPRENEURSHIP AT NYU

NYU actively promotes entrepreneurship, and over 50 companies have been created based on NYU technologies. In the most recent published comparative data on technology commercialization activities at US universities, NYU created 80% more new start-up companies per research dollars expended than the national average. To encourage the seeding of new companies, the Office oversees an Applied Research Support Fund to provide bridge funding for commercially promising technologies. To date, a total of \$1.6million has been invested by NYU under the Fund, and over \$25 million has been generated from subsequent licensing and commercialization. In 2010, NYU announced the creation of the NYU Innovation Venture Fund, a \$20 million venture capital fund to further promote entrepreneurship and accelerate the commercial development of NYU technologies.

#### CONTACT US

We encourage companies, venture investors, and entrepreneurs to contact us to explore how we can work together developing new technologies and creating new ventures to benefit the public and promote economic development.

### **Contact Information**

Office of Industrial Liaison / Technology Transfer New York University 650 First Avenue, 6th Floor New York, NY 10016

> Abram Goldfinger Executive Director T 212.263.8178 F 212.263.8189 www.nyu.edu/oil



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# **TECHNOLOGIES AVAILABLE FOR LICENSING:** CNS:

• Whereas traditional mood altering agents require chronic administration for days or weeks before any effect can be seen, Dr. Eric Stone has developed a new class of psychotherapeutic agents that display an immediate effect upon depression, anxiety, and ahedonism, and without stimulation or sedation. There is a protected drug target associated with these compounds, along with a clear mechanism of action and a well-characterized lead candidate. For further details contact Andrew Koopman at andrew.koopman@nyumc.org.

## **ONCOLOGY**:

- Dr. George Lipkin has discovered a peptide, CIF, which has been shown to cause the permanent regression of cancer. *In vivo* regression or disappearance of tumors has been seen in a human xenograft model, as well as in two other mammalian species. *In vitro*, CIF restores normal growth controls and normal cytoskeletal structure to cancer cells of various origins and species. CIF has been characterized and is an endogenous, cyclic decapeptide. For further details contact Andrew Koopman at <u>andrew.koopman@nyumc.org</u>.
- Dr. Ramanuj Dasgupta has developed chemical screening technologies and identified compounds that act at very specific steps in the Wnt pathway linked to numerous cancers such as hepatic, colorectal, breast and skin cancer. This approach is game changing as unsuccessful Wnt-targeting therapeutics have mostly focused on upstream and generally unspecific inhibition. The compounds identified by Dr. Dasgupta have significant activity against tumors, highlighting their potential as cancer therapeutics and the robustness of the screening system to identify precise modulators of Wnt. For further details contact Sadhana Chitale at sadhana.chitale@nyumc.org.
- Dr. Mark Philips has identified new drug targets and developed new screening technologies against the Ras oncogene, mutated in over 30% of all cancers, 90% of pancreatic cancers, 50% of colon and lung cancers. Dr. Philips has identified new compounds that represent a new mechanism of action against Ras that overcomes the previous limitations of numerous anti-Ras interventions by the pharmaceutical industry. For further details contact Sadhana Chitale at sadhana.chitale@nyumc.org.

## **ORTHOPEDICS**

• Dr. Peter Walker has conceived and advanced a program to develop a system for the early treatment of osteoarthritis of the knee that will significantly reduce the cost and recovery time for such procedures, and preserve almost normal knee function. The new system will consist of small implantable components that can be inserted through relatively small incisions in order to resurface only those areas of worn cartilage affected at the early stage of arthritis. The components restore the original joint surfaces and retain all ligaments, returning the knee close to its normal, intact state. For further details contact Andrew Koopman at andrew.koopman@nyumc.org.

## CARDIOVASCULAR

• The life threatening tissue damage that occurs as a result of myocardial infarctions (MI), strokes, or other ischemic reperfusion (IR) events can not only be prevented but also reversed through the infusion of a tetrapeptide designed in the laboratory of Dr. Evgeny Nudler. In a rat model of MI, this compound produced a significant diminution in infarct size and preservation of numerous hemodynamic functions. Most significantly, since these peptides can repair as well as prevent IR damage, they can be administered subsequent to an event. In fact, treatment 30 minutes after reperfusion was just as effective as treatment 5 minutes after reperfusion. For further details contact Andrew Koopman at andrew.koopman@nyumc.org.

## **ANTI-INFECTIVE:**

• Dr. Kent Kirshenbaum has used biomimetic techniques to develop peptoids (Oligo-N-substituted glycines) that display non-hemolytic, antimicrobial activity against both gram-negative and gram-positive bacteria including clinical MRSA isolates. Moreover, their membrane-perturbing mechanism of action is difficult for bacteria to establish resistance to. Dr. Kirshenbaum has optimized peptoid synthesis to enable rapid and high yielding pharmaceutical compositions that are highly stable and resistant to enzymatic degradation. For further details contact Sadhana Chitale at <u>sadhana.chitale@nyumc.org</u>.

## **AUTO-IMMUNE DISORDERS:**

• Dr. Dan Littman has developed screening technologies to identify functional targets and small molecule inhibitors of inflammatory Th17 cells, associated with mediating autoimmune disorders including Crohn's disease, psoriasis, multiple sclerosis and arthritis. Using these novel assays, Dr. Littman has identified compounds that specifically inhibit Th17 cells as well as effectively reduce the onset and severity of experimental autoimmune encephalomyelitis in mice. For further details contact Sadhana Chitale at <u>sadhana.chitale@nyumc.org</u>.

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