The University of Texas at Arlington is a comprehensive urban research institution of close to 57,000 students served on campus and online, and a preeminent place for intellectual pursuits. UTA's Strategic Plan 2020: Bold Solutions | Global Impact focuses on enabling a sustainable megacity through research and teaching in the four theme areas of Health and the Human Condition, Sustainable Urban Communities, Global Environmental Impact, and Data-Driven Discovery.

- In 2016, UTA was named in the elite group of R1: Doctoral Universities - Highest Research Activity by the Carnegie Classification of Institutions of Higher Education, joining a distinguished group of 115 institutions including Harvard, MIT and Johns Hopkins.
- The University also broke ground on a new $125 million Science and Engineering Innovation and Research building, which will be the university's signature research facility for multidisciplinary life and health science teaching and research.
- UTA’s cancer research is also moving out of the lab and into the commercial sector, with several companies formed around the university in key areas like immunotherapy or the development of novel chemical compounds to attack cancer.

FAST FACTS
- More than $6 million in new cancer research grants in 2016
- More than 25 researchers focused on cancer across the Colleges of Science, Engineering and Nursing and Health Innovation
- Two companies created at UTA to focus on novel chemistries and immunotherapies to treat cancer
- 13 patents issued for cancer treatments and technologies over the last five years

UTA IS DEVELOPING MAJOR EXPERTISE IN CANCER RESEARCH
- UTA’s scientific expertise across basic cancer research, identification and diagnostics, and non-invasive, mid-term, invasive and post-operative therapies is accelerating dramatically.
- The below graphic displays the wide range of research ongoing at UTA around new ways to find and treat the disease.
$6 MILLION IN NEW GRANTS IN 2016 FOR CANCER

- **$900,000** Cancer Prevention and Research Institute of Texas, Baohong Yuan, bioengineering, to optimize deep-tissue imaging technologies
- **$500,000** University of Texas System Science and Technology Acquisition and Retention (STARS) program, to Zui Pan, nursing, to develop biomarkers for cancer
- **$823,000** Cancer Prevention and Research Institute of Texas, to Mark Pellegrino, to study mitochondrial stress signaling in the context of cancer.
- **$1,300,000** National Science Foundation, to Heng Huang, for an integrative study of cancer imaging-omics
- **$535,763** Faculty Early Career Development, or CAREER, grant to Junzhou Huang, to discover a process by which image-omics data can be combined into small files to allow scientists to better predict how long a patient will live and how best to treat that patient
- **$500,000** Faculty Early Career Development, or CAREER, grant, to Yuze “Alice” Sun, to develop optofluidic lasers to detect biomarkers for cancer diagnosis
- **$415,000** National Institutes of Health, to Mingwu Jin and team from UT Southwestern and MD Anderson Cancer Center, to develop a multifunctional platform that can integrate imaging and photo-induced cancer therapy in a single, portable device.
- **$100,000** UT Southwestern Medical Center, to Mingwu Jin and team from UT Southwestern’s Department of Radiation Oncology, to simulate the effect in the body of heavy ion therapies.
- **$477,000** National Institutes of Health, to Mingwu Jin and team at UT Southwestern, to improve the quality of image-guided radiotherapy techniques
- **$340,000** Chinese biomedical firm, to Wei Chen, to develop nano hair dyes with no carcinogens
- **$25,000** UT Southwestern Medical Center, to Hanli Liu for imaging project.

**PATENTS**

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<tr>
<th>Inventors</th>
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<td>Jongyun Heo</td>
<td>Methods for Inhibiting Redox-Sensitive GTPases</td>
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<td>Hanli Liu; Vikrant Sharma</td>
<td>Optically Guided Needle Biopsy System Using Multi-Modal Spectroscopy in Combination with a Transrectal Ultrasound Probe</td>
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<td>Kytai Nguyen; Maham Rahimi; Sourjanya Kona; Arthur H. Lin</td>
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<td>Wei Chen; Yuebin Li</td>
<td>Nanoparticles for Use in Tumor Diagnosis and Therapy</td>
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<td>Hanli Liu; Jeffrey Cadeddu; Disha Peswani</td>
<td>Optical Methods to Intraoperatively Detect Positive Prostate and Kidney Cancer Margins</td>
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<td>Sanjay Awasthi; Sharad Singhal; Sushma Yadav</td>
<td>Therapies for Cancer Using RLIP76</td>
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<td>Sanjay Awasthi; Sharad Singhal</td>
<td>RLIP76 Liposomes for Protection Against Irradiation</td>
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<td>Subhrangsu Mandal; Khairul Ansari; James Grant</td>
<td>Apoptotic and Anti-Tumor Activities of Metallo-Salens</td>
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<tr>
<td>Sanjay Awasthi; Sharad Singhal</td>
<td>Protection Against and Treatment of Ionizing Radiation</td>
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**CANCER RESEARCHERS**

- Sen Xu, biology: genetic mutation of cancer cells
- Mark Pellegrino, biology: mitochondrial stress signalling
- Clay Clark, biology: programmed cell death
- Jon Weidanz, biology: immunology
- Jonghyun Yun, mathematics, integrative statistical models
- Suvra Pal, mathematics: disease modelling
- Mingwu Jin, physics: devices to improve treatment delivery
- Wei Chen, physics: photosensitive nanoparticles
- Frederick MacDonnell, chemistry and biochemistry: novel chemistries
- Jongyun Heo, chemistry and biochemistry: immune response

**ENGINEERING**

- Baohong Yuan, bioengineering: imaging technologies
- Heng Huang, computer science and engineering: cancer imaging-omics
- Junzhou Huang, computer science and engineering: image-omics
- Samir Iqbal, electrical engineering: cancer detection device
- J.-C. Chiao, electrical engineering: microfluidic devices
- Yuze “Alice” Sun, electrical engineering: optofluidic lasers
- Yaowu Hao, materials science and engineering: radiotherapeutic nanoseeds
- Kytai Nguyen, bioengineering: nanoparticles, microparticles and hydrogels
- Liping Tang, bioengineering: cancer traps
- Hanli Liu, bioengineering: imaging
- Shouyi Wang, industrial and manufacturing systems engineering: imaging
- Chris Ding, computer science and engineering: cancer imaging-omics
- Jia Rao, computer science and engineering: cancer imaging-omics

**NURSING**

- Zui Pan, nursing: biomarkers cancer
- Mark Haykowsky, kinesiology: cardio-oncology
- Marco Brozzo, kinesiology: aging
- Paul Fadel, kinesiology: clinical translational science