Center for Leadership in Technology Commercialization

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Background and Significance

- NMT professors and students have been making inventions and discoveries since the Nicotine patch and before
- No streamlined route to commercialization
- No options for involving students
- Our school has diverse departments and conducts research in a wide variety of science and engineering fields
- To commercialize these diverse NMT-created opportunities a Center which will partner with large law firm(s) and connect us to various industries was needed
- Thus, Dr. Peter Anselmo formed the Center for Leadership in Technology Commercialization (CLTC)

Materials and Methods

- Identify professors and students involved in research
- Involve interdisciplinary teams into looking at the markets relevant to the particular inventions
- Research and determine the patentability of the inventions
- Strategically plan the patenting and the commercialization process for each of the inventions
- Design the invention disclosure form to protect the intellectual property for NMT
- Meet with patent attorneys and decide which partnership is most likely to succeed
- File a patent for the invention
- Find way to commercialize the invention, preferably through industrial partnerships

Student Teams were established in a multi-disciplinary manner so as to encourage students learning by interacting with a variety of science and engineering departments.

Team 1: Drug Discovery
- Management of Technology
- Chemical Engineering
- Biology

Team 2: Magnetic Refrigeration
- Mechanical Engineering
- Management
- Environmental Engineering

Team 3: Commercialization of Technology from Lawrence Livermore Labs
- Management
- Management
- Computer Science

Abstract

The CLTC serves to commercialize research and development at New Mexico Tech.
The goal is to generate new revenue sources from licensing and start-up companies based on the research and technologies of New Mexico Tech.

Results

Students have been involved in meetings with patent attorneys and the writing and filling out of invention disclosure forms. Team 1 has been heavily involved in the research and commercialization efforts in the novel drug created at NMT that cures certain cancers and MRSA. Team 2 worked in the research labs and on the interdisciplinary team in attempt to commercialize in the novel magnetic refrigeration. Team 3 has visited and worked with Lawrence Livermore Labs in both development and commercialization in their technology.

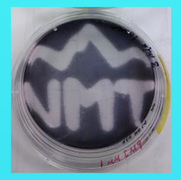

Figure 1: NMT Logo etched into human cervical cancer cells. Unstained regions are where the cancer cells were selectively killed with a new light-activated drug designed and developed at NMT

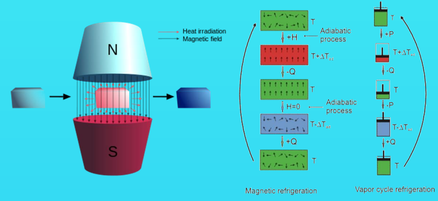

Figure 2: Simple explanation of magnetic refrigeration process

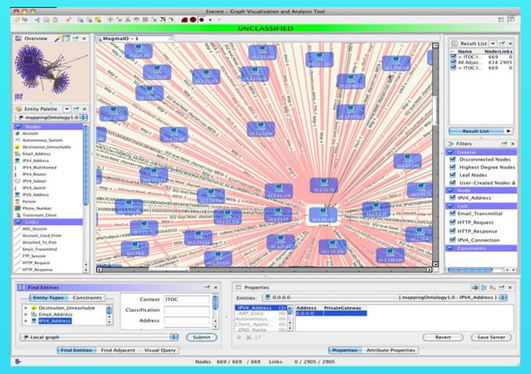

Figure 3: Simple explanation of Lawrence Livermore Technology

Posters at this 49ers presentation that are involved in research with the CLTC:
- Novel Anticancer Drugs on the Basis of Diversely Functionalized N-Containing Heterocycles
- New Method of Synthesis of Sulfur-Containing, Nucleic Base Analogs
- Defeating Cancer: AKS Compounds for Treatment of Drug-resistant Cancers
- Antimicrobial Chemotherapeutic IM Compounds: Photodynamic Therapy and Synergistic Effects
- Drug Analysis Against *Candaia albicans*
- Drug Targeting of IM9, a Novel Anti-Cancer Agent

Conclusions

- One project has reached invention disclosure stage and has held meetings with patent attorneys
- Greater interaction with more science and engineering teams
- Tech community as a whole is excited about moving forward to the commercialization process
- Students have learned about the commercialization process thru direct involvement in project development
- Involvement in student research is increasing
- Enrichment of student learning through conferences and networking with industry
- Student have presented on their research in commercialization
- Students have learned to work in multi-disciplinary teams

Future Work

- Encourage the researches at New Mexico Tech to commercialize their science and engineering discoveries
- Outreach and creating better research environment at Tech
- Involve more students in commercialization and research aspects
- Making industrial partners for New Mexico Tech
- Providing students with more learning opportunities
- Generate novel sources of funding for NMT

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