

Tech Transfer Times

"Tech Transfer Basics for Faculty and Students"

On December 5, The Technology Transfer Office held a seminar under the Gear Up for Grants program, presenting the basics of Technology Transfer and what faculty and students need to know when it comes to Intellectual Property (IP) rights at NDSU.

Highlights included:

- Types of IP
- Basic Patent Law
- Patent Process
- Public Disclosures
- Inventorship vs. Ownership
- Types of Agreements
 - CDA's
 - MTA's
 - Licenses
- Faculty Startups

If you missed this seminar, the Power Point Slides are available at the TTO website. Click on "For University Researchers", "Research and Intellectual Property at NDSU".

http://www.ndsu.edu/research/technology_transfer_office/

NDSU Policy 190

INTELLECTUAL PROPERTY

The purposes of this policy are to encourage and promote research and scholarship based on the traditional principles of the academic profession. Read NDSU Policy 190 at:

www.ndsu.edu/fileadmin/policy/190.pdf

NDSU-Developed Spring Wheat and Durum Varieties have Major Impact in North Dakota



'Barlow' Hard Red Spring Wheat, known for its high yield potential, superior baking quality and resistance to disease

WHEAT: NDSU, through the ND Agricultural Experiment Station, has developed three of the top five hard red spring wheat varieties, accounting for **nearly 45%** of the 5.50 million acres of spring wheat planted in North Dakota in 2012. The top hard red spring wheat variety planted in North Dakota was 'Barlow' with 17.2% of the acres, followed by 'Glenn' with 14.4% and 'Faller' with 13.1%.

NDSU-developed varieties were planted on **over 55%** of the acres in North Dakota with eight of the top sixteen spring wheat varieties planted in 2012. The 'Mott', 'Steele-ND', 'Prosper', 'Howard', and 'Alsen' varieties were the other NDSU-developed varieties planted. Several of these varieties were suitable for the neighboring states of Minnesota, South Dakota, and Montana, and 'Glenn' has been licensed by the NDSU Research Foundation in Canada. Dr. Mohamed Mergoum is the NDSU spring wheat breeder who is responsible for developing most of these varieties. Wheat generated over \$1.07 million dollars in research fee/royalty revenue to the NDSU Research Foundation in FY-12, of which a portion will be used to support continuing wheat breeding research at NDSU.

DURUM: Even more impressive is that nine of the top ten durum wheat varieties, accounting for **nearly 88%** of the 1.40 million acres planted in North Dakota in 2012, were developed at NDSU. The top durum wheat variety planted in North Dakota was the 'Divide' variety with 30.4% of the acres, followed by 'Alkabo' with 14.7%, 'Mountrail' with 13.3%, 'Lebsock' with 10.3%, and 'Grenora' with 10.2%. Several of these durum varieties were also planted in Montana. Dr. Elias Elias, *University Distinguished Professor* in Plant Sciences, is the durum wheat breeder who developed these varieties. The Divide, Alkabo, Grenora, and Tioga varieties generated over \$74,000 in research fee/royalty income in FY-12 to the NDSU Research Foundation which also provides partial support to the NDSU durum breeding research program.

The planted acreage statistics are based on a survey of wheat and durum producers conducted in June by the North Dakota Field Office of USDA's National Agricultural Statistics Service.



'Divide' rated "Excellent" by the NDSU Cereal Chemists for its agronomic, milling and spaghetti processing performance

Dr. Elias Elias Named University Distinguished Professor



On October 4, 2012, President Dean Bresciani announced a new University Distinguished Professor, Dr. Elias Elias. Dr. Elias began his career at NDSU in 1990 as assistant professor with the durum wheat breeding and genetics program. He is now full professor and the J.F. Carter Durum Wheat Breeding/Genetics Endowed Professor, whose program's goal is to "develop durum wheat varieties to maximize return for producers and to provide excellent quality durum wheat for the pasta industry and the international export market." Currently there are 14 active varieties of durum licensed through the NDSU Research Foundation developed by Dr. Elias. These varieties collectively are grown on over 90% of the durum acreages in North Dakota. The most recent release is 'Carpio' which has an "Excellent" rating by the NDSU Cereal Chemists.

Success Stories

c2renew corp Licenses NDSU Green Technology



Dr. Chad Ulven

A technology developed at NDSU creates performance-driven biocomposite materials by incorporating agricultural by-products into plastics for a wide range of engineering applications.

Developed by Dr. Chad Ulven, Associate Professor of Mechanical Engineering and his research team at NDSU, the technology could be used anywhere commodity thermoplastics are typically used—but has been focused on agricultural equipment applications such as interior/exterior handles, consoles, and protective shrouds, as well as under-the-hood belt guards, fan shrouds, and ducting.

The technology offsets the costs and need to use petroleum-based polymers/plastics by using renewable agricultural by-products that are currently considered waste, being used as animal feed/bedding, or used as low-cost combustion by-products for heat energy.

"c2renew designs biocomposite materials to meet the performance specifications required by our customers with lower cost, renewable resources," said Ulven. "We not only supply companies with drop-in plastic replacement solutions, but also assist them with component and process design."

Currently c2renew is anticipating product introduction to begin in early 2013. They will be setting up offices in NDSU Research and Technology Park (RTP) Incubator building north of campus and setting up laboratories there, as well. Manufacturing sites in rural North Dakota are being considered which will bring new jobs to our state.



Examples of biocomposite materials used by c2renew that reinforce and strengthen plastics

Corey Kratcha, NDSU graduate and CEO of c2renew says, "It's a great experience to be a part of building a business around technology that was developed within NDSU."



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Business School Collaboration May Result in a New "Tool" for Research Capabilities for the Tech Transfer Office

When a new innovation is reported to the TTO office, one of the most time consuming tasks we have is to look for "Prior Art". Simply stated, "Prior Art" includes patents or research papers that are similar to the reported invention. Researching Prior Art, helps us make a decision of whether the invention is novel, and if we should pursue a patent on the new invention.

In a collaborative effort, the Technology Transfer Office/NDSU Research Foundation recently created a partnership with NDSU's College of Business to improve its research capabilities for finding these prior art documents. Two groups of students from a senior-level Management Information Systems (MIS) class, taught by Dr. Limin Zhang, developed search programs that use key search terms to identify related patents. Currently, our offices use multiple web-based resources to complete this same level of scrutiny.

These first attempts look very promising and we hope to continue this collaboration with another advanced class of MIS students so that the "tool" will continue to grow and mature to include other aspects of technology commercialization. The possibility exists to also use graduate level students in the future. Each time, we hope to enrich the educational experience of the students involved, while improving the efficiency and quality of the TTO's operations with little expense, thereby creating a "win win" situation for NDSU.

Contact

Dale Zetocha
Director
dale.zetocha@ndsuf.edu

Jonathan Tolstedt
Licensing Associate/
Patent Agent
jonathan.tolstedt@ndsuf.edu

Grant Brewer
Licensing Associate
NDSU Research Foundation
gbrewer@ndsuf.org

Location:
Technology Transfer Office
1735 NDSU Research Park Dr
Suite 124
 Fargo, North Dakota 58108-6050

Office: 701-231-6659

Q & A: Why didn't you patent my great idea?

Q: Recently I did some great research that resulted in a "breakthrough in my field". Why did you choose not to patent it?

A: Your innovation may be important to the research community, but our office uses 3 criteria to evaluate whether or not to file a patent:

First is it useful, novel and non-obvious?

Secondly, with patent expenses averaging around \$25,000, is the market big enough to justify spending this money with the hope of recovering the cost, as well as making money on it?

Thirdly, is the development stage too early? Companies often do not want to license a technology without evidence that it will develop into a finished product that exhibits the criteria promised.

Pharmaceutical and medical innovations also require many years of testing before the FDA eventually gives its approval. For this reason, it can be very expensive process with little hope for return on the dollars invested.

To read NDSU's policy 190 go to:
www.ndsu.edu/fileadmin/policy/190.pdf