

NDSU RESEARCH
SPARKS ALUMNUS'
DISTINGUISHED CAREER

John Hanish, BS '86, chemistry, history, is an intellectual property attorney for one of the world's top law firms. But his career path started in a research lab at NDSU.



He planned on following his older brother's path and become a medical doctor. As a freshman, Hanish began assisting graduate students who were studying thyroid metabolism in the biochemistry lab of Alan Fischer, who would later become dean of the college. The lab work sparked an interest in what Hanish calls "the chemistry of biochemistry."

He also began to appreciate research. When it came time to look at medical school or graduate school, Hanish decided to pursue biochemistry. He attributes that choice to trying new things, including attending presentations and lectures from outside his major.

"My experience at NDSU broadened my horizon so I could see that if you were interested in medicine or biological sciences or chemistry, there were other things you also could consider," he said. "The best thing is to be open to different sources of information. You can't choose a certain career path if you don't know anything about it."

MERGING LAW, SCIENCE

Hanish spent three years doing lab research at the University of Chicago where he earned a doctorate in biochemistry and molecular biology. He then went to Rockefeller University to conduct postdoctoral research in cell biology before going to the New York University School of Law.

"I became a lawyer with a science background and an interest in patent law," he said.

Hanish is a partner in Goodwin Procter's Intellectual Property Litigation Practice in New York. He focuses on patent infringement and patent licensing disputes. He also counsels inventors and entrepreneurs regarding patent procurement.

He advises students to take part in rigorous classroom and research experience. "NDSU is at its best doing that for students," he said. "It did that for me, and that's still helping me now."

Hanish, a Fargo native, shared his story with NDSU students after being named the 2014 Distinguished Alumnus for the College of Science and Mathematics.

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JACK AND JAN FULLER SCHOLARSHIP PAYS IT FORWARD



Lifelong education is important to Jack and Jan Fuller. Jack, MS '75, education administration, spent 22 years as elementary principal in Casselton, North Dakota.

He established a scholarship in his and his wife's name to support students in the College of Science and Mathematics. The Jack and Jan Fuller Scholarship is awarded annually to a junior who can demonstrate a financial need, is a U.S. citizen and North Dakota high school graduate, and carries a minimum GPA of 3.5. The college's scholarship committee awards the scholarship.

Brandi Hoffart, who is majoring in psychology, was named the scholarship's first recipient in spring 2015. She hopes to become a child and adolescent psychiatrist.

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SCIENCE AND MATHEMATICS
NEWSLETTER

DEAN’S MESSAGE



Hello alumni and other friends of the College of Science and Mathematics. Many wonderful things have been going on in the college since our last newsletter. The college has been busy initiating and expanding programs to improve the quality of student learning, including the new Math Emporium (see article in this newsletter) and our Learning Assistant’s program that places talented undergraduate students in several of our large-enrollment courses to assist instructors who employ active learning. We also maintain a strong program in Discipline-Based Education Research that has led to improvements in student learning and engagement in our classrooms and instructional laboratories. We are looking forward to the completion of the new STEM Classroom and Lab Building in January 2016 in which we can apply new active-learning pedagogies and modern technology.

The college continues to play a leadership role in several major, federally funded research initiatives on campus and many of our junior faculty are having great success obtaining their first, and in many cases second and third, grant. Our students, faculty and alumni are winning local, regional and national awards (see articles about Jackie Wrage, John Hanish and Cheyenne Brady). Recent stories of faculty and student research that have gone “viral” in the global media include Tim Greives’ work on the mating advantages that accrue to birds who are early risers (www.washingtonpost.com/news/morning-mix/wp/2015/06/05/study-finds-that-early-birds-get-the-worm-and-the-ladies/) and the work of Muk Sibi and Dean Webster on plastics made from biomass that can be degraded at will using light back to the monomers for recycling (www.ibtimes.co.uk/plastic-made-biomass-degrade-back-original-molecules-after-use-1476659). The college contributes top-notch research and education to the state, the nation and the world. For updates on the accomplishments of the college, follow my Twitter feed @CSMDEAN.

Our ability to remain on the cutting edge in teaching, research and outreach depends on the generosity of our alumni and friends. Your gifts have a huge impact on the education our students receive. We welcome your continued support!

Scott Wood

DIRECTOR OF DEVELOPMENT JOINS COLLEGE

Monique Anderson, BA ’85 psychology, MS ’87 community and regional planning, joined the College of Science and Mathematics as director of development. The position allows development efforts to be focused on the departments within the college.

Anderson and her husband, Keven, have two daughters and live on a third-generation family farm near Lake Park, Minnesota.

“I am excited to help facilitate educational and research opportunities for students now and in the future,” she said.



Reach Monique at 701-231-6131 or monique.anderson@ndsu.edu.

STUDENTS, FACULTY ENCOURAGE KIDS’ INTEREST IN MATH



NDSU students and faculty spent two weeks this spring visiting more than 1,000 elementary and middle school students. They brought games and activities that used mathematical concepts. Then they invited local kids in grades K-6 to campus for a Math Fair.

The outreach was geared to kids in that age group because by about fifth grade, they can be soured on math if they hear negative messages or have discouraging experiences, said Benton Duncan, associate professor and chair of the NDSU Department of Mathematics. The lack of interest or confidence inhibits students from pursuing higher levels of math, which ultimately affects the workforce and medical, scientific and technological advancement.

GEOLOGY STUDENT RECEIVES PRESTIGIOUS FULBRIGHT RESEARCH GRANT

NDSU senior geology student Jackie Wrage is using a prestigious Fulbright grant to work with a University of Chile research group on a geothermal energy study. The 2016 project could aid the Chilean government’s recent push to have 20 percent of its power supplied by renewable resources by 2025.



The Fulbright program is the flagship international educational exchange program sponsored by the U.S. government. Recipients are selected based on their proposal and academic or professional achievement. Wrage was a strong Fulbright candidate because of the experience she gained conducting a variety of research projects as an NDSU undergraduate.

“I like to try new things and I never turn down new opportunities,” said Wrage, from Gwinner, North Dakota. “Studying and doing research in Chile will be a lot of fun, and it will also give me a chance to perform some really advanced research.”

Read more about Wrage at <http://bit.ly/1RoTHx>.

NEW LEARNING CENTER FOCUSES ON STUDENT SUCCESS IN MATH

The Department of Mathematics is scheduled to open the Math Emporium Learning Center this fall. It is designed to accommodate different learning styles and to give students structured practice and feedback in foundational math courses.

The learning center is equipped with 82 learning stations and staffed by faculty, graduate students and undergraduate teaching assistants. Students taking college algebra, trigonometry and pre-calculus will use state-of-the-art math software to study and practice course material. The software includes videos, animations and tutorial exercises that accompany textbooks. Learning center instructors will provide immediate feedback on students’ work and offer optional live lectures.

The learning center environment allows a higher level of personalized instruction than traditional lecture formats. It also helps students develop study skills that are transferrable to other courses.

LET’S CONNECT

We want to stay in touch and keep you updated about what’s happening in the College of Science and Mathematics. In addition to mailers like this one, we provide several ways to get information and engage.

Feel free to contact us at 701-231-7411 or nancy.suttle@ndsu.edu.

Website: www.ndsu.edu/scimath.

Find out what your classmates are up to at www.ndsu.edu/classnotes.



ALUMNA NAMED MISS INDIAN WORLD

Cheyenne Brady, BS ’15, psychology, was named Miss Indian World at the 2015 Gathering of Nations, one of the largest powwows in the United States. As Miss Indian World, she serves as a role model and represents Native Americans and Native American culture at events around the world.

“This is not about me,” she said. “I’m a vessel for all our tribes to get out there and raise awareness.”

Brady, who is from New Town, North Dakota, is a member of the Sac and Fox tribe and has ancestors from the Cheyenne, Pawnee, Otoe, Kiowa, Apache, Hidatsa, Arikara and Tonkawa tribes. She will continue her studies in NDSU’s Master of Public Health program, which has the only American Indian health specialization in the country.

COLLEGE HEADLINES

- Researchers to use Sanford Health grants to focus on human health, nutrition
 - NDSU researcher studies why cells die
 - Alumna’s career built on helping youth
 - New STEM building takes shape
- Visit ndsu.edu/scimath to read these and other recent stories.

JOIN US FOR HOMECOMING

Homecoming 2015 is scheduled Oct. 5-11 in downtown Fargo and throughout campus.

For more information, visit www.ndsu.edu/homecoming.