

# Danylo Fedkiv

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## EDUCATION

**Florida Atlantic University, Wilkes Honors College**

Jupiter, FL

**4.00 / 4.00 GPA**

Aug 2023 - May 2028

*B.S. in Biological and Physical Sciences, Concentrations in Chemistry and Biology*

*Minors in Mathematics and Philosophy, Undergraduate Research Certificate, Honors College Scholar*

**Florida Atlantic University High School**

Boca Raton, FL

**4.00 / 4.00 GPA**

Aug 2022 - May 2026

*High School Diploma: Summa Cum Laude, Research, STEM Club, Volunteering, National Merit Scholar, Pathfinder Nominee, Rotary Club Scholar.*

## RESEARCH OCCUPATIONS

**Laboratory Assistant — Dr. Gregg B. Fields' Laboratory**

Jupiter, FL

*Department of Chemistry and Biochemistry, Florida Atlantic University College of Science*

Jun 2024 - Present

- Synthesized and evaluated peptide probes for selective MMP-13 identification, small-molecules for MT1-MMP inhibition, and peptides for MT5-MMP inhibition.
- Learned proper organic synthesis techniques, instrumentation of various chemical instruments (UPLC/MS, MALDI-MS, HPLC, Kinetics Analyzer), and basic biochemical analysis techniques (Enzyme Kinetics).
- Presented 2 Research Posters and 3 Oral Talks. Awarded nationally-recognized Goldwater Scholarship.

## PROFESSIONAL EXPERIENCE

**Calculus 2 Tutor — FAU Math Learning Center**

Boca Raton, FL

*Center for Student Learning and Success, Florida Atlantic University*

Aug 2025 - Present

- Tutored 15+ students 1-on-1 on difficult calculus topics, ensuring student success || CRLA Level 1

## PROJECTS

**Discovery, Synthesis, and Evaluation of Selective Inhibition of MT5-MMP through Novel Peptides**

- Co-designed and -synthesized 5 peptide-based MT5-MMP inhibitors.
- Currently, 3 inhibitors have shown to substantially decrease MT5-MMP activity against Knight Substrate.

**Discovery, Synthesis, and Evaluation of Inhibition of MT1-MMP through Novel Small Molecule Inhibitors**

- Fully designed and synthesized 7 small molecule-based MT1-MMP inhibitors.
- Testing is ongoing.

**Effects of Analgesic Drugs on Oxidative Stress Electrophysiological Responses from *Lumbricus Terrestris***

- Examined the effects of NSAIDs on *Lumbricus terrestris* electrophysiological properties after radical damage.
- Acetaminophen had the largest effect on reversing the effects of oxidative stress.

**Synthesis and Evaluation of Novel FRET-Based Fluorogenic MMP-13 Peptide Probes**

- Co-synthesized, -purified, and -verified novel FRET-based peptide probes for identifying MMP-13.
- Two peptides were shown to be effective MMP-13 probes, with testing ongoing for the third peptide.

## PRESENTATIONS

Max Planck Symposium — **Design and Evaluation of MT1-MMP Small Molecule Inhibitors (Oral)**

Apr 2026

WHC Spring Symposium — **Design and Evaluation of MT1-MMP Small Molecule Inhibitors (Oral)**

Apr 2026

FURC — **Design and Evaluation of MT1-MMP Small Molecule Inhibitors (Poster)**

Mar 2026

WHC Fall Symposium — **Design and Evaluation of MT1-MMP Small Molecule Inhibitors (Poster)**

Nov 2025

NeuroCollective — **NSAIDs on the Electrophysiological Properties of Neurons in *Lumbricus terrestris* (Poster)**

May 2025

WHC Spring Symposium — **Design and Evaluation of MMP-13 FRET Probes (Oral)**

Apr 2025

## LEADERSHIP

**FAUHS Science Olympiad Team Captain**

Boca Raton, FL

- Led and developed a high school science olympiad team, earning 60+ students over 50 medals.

Aug 2024 - May 2026

**Neurophysiology TA**

Jupiter, FL

- Developed an 80-page neurophysiology manual, aiding 40+ students in neuroscience.

Jun 2025 - Dec 2025

**Research Methods TA**

Jupiter, FL

- Provided instruction on professional development and research involvement to 20+ students.

Jan 2025 - May 2025

## Highschool Biology TA

- Developed a 100-page biology guide and 24 slideshows; graded assignments of 150+ students.

Boca Raton, FL  
Jan 2024 - May 2025

## VOLUNTEERING

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### Jupiter Medical Center Histology Volunteer

- Organizing cell blocks, histology slides, and various laboratory liquids || 30 Hours.

Jupiter, FL  
Feb 2026 - Present

### STEM Volunteer Tutor

- 30+ students impacted 1-on-1 in biology, math, and chemistry || 500 Hours.

Boca Raton, FL  
Aug 2022 - May 2025

## TECHNICAL SKILLS

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### Laboratory Skills

Solid-phase peptide synthesis, HPLC (prep & analytical), UPLC-MS, MALDI-MS, FT-IR, NMR spectroscopy, UV-Vis spectroscopy, fluorescence spectroscopy, enzyme kinetics assays, mass spectrometry interpretation. Chromatography (TLC, column chromatography), purification (recrystallization, extraction), distillation (simple/fractional), filtration techniques, titrations, solution preparation, dilution design, micropipetting

### Computational Skills

Python (NumPy, Pandas, Pyplot, Seaborn, Pingouin, Scipy, data wrangling, basic statistical analysis, biostatistics), Jupyter Notebook, Anaconda, SQL. Experimental data analysis (enzyme kinetics, dose-response interpretation, comparative group analysis). Scientific visualization (Excel, PowerPoint-based figure generation, Pyplot, Seaborn)

### Research & Scientific Skills

Microsoft Office Suite, Google Workspace, SciFinder, PubMed, Google Scholar, Scientific poster and presentation design

## AWARDS & HONORS

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<b>Benacquisto Scholarship</b> — C.o.A (all terms)	Aug 2026
<b>Barry Goldwater Scholarship</b> — \$7,500 (two terms)	Mar 2026
<b>Bright Futures Academic Scholarship</b> — C.o.T. (all terms)	May 2026
<b>National Merit Scholar</b> — \$2,500	Apr 2026
<b>FAU Business Pitch Competition Finalist</b> — \$250	Apr 2026
<b>Kenan Social Engagement Scholarship</b> — \$3,500	Jan 2026
<b>December Rotary Club Scholar</b> — \$1,000	Dec 2025
<b>Pathfinder Academic Excellence Nominee</b>	Dec 2025
<b>FAU WAVE Competition for Business Ventures</b> — \$500	Oct 2025
<b>FAU Spring 2025 OURI Research Grant</b> — \$600	Jan 2025
<b>FAU President's Honor List (7x)</b>	Fall 2023 - Spring 2026

## TEST SCORES

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<b>ACS Instrumental Analysis Exam</b> — 100th Percentile	May 2026
<b>ACS Organic Chemistry Exam</b> — 98th Percentile	Dec 2025
<b>SAT</b> — 1530/1600	Mar 2025
<b>PSAT</b> — 1520/1520	Oct 2024