

# Joanna A. Sanchez

Phone: 630-965-1376 Email: [jsanc221@illinois.edu](mailto:jsanc221@illinois.edu)  
Website: <https://joanna-sanchez.github.io/joanna.sanchez.rocha/>   
Linkedin: [www.linkedin.com/in/joanna-s-248221122](https://www.linkedin.com/in/joanna-s-248221122) 

## EDUCATION

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<b>University of Illinois Urbana-Champaign</b> <i>Undergraduate Student at the College of Liberal Arts &amp; Sciences, School of Molecular &amp; Cellular Biology</i>	<b>Aug 2023 - Present</b>
<b>Waubonsee Community College</b> <i>Associate in Applied Science</i>	<b>Aug 2017 - Aug 2022</b>
<b>East Aurora High School</b> <i>Graduated with honors</i>	<b>Aug 2013 - May 2017</b>

## PROFESSIONAL APPOINTMENT

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<b>Academic Support Paraprofessional Tutor (biology/anatomy)</b> <i>Waubonsee Community College</i>	<b>Spring 2023 - Present</b>
<ul style="list-style-type: none"><li>• Providing subject matter expertise and serving as models for students in the techniques, strategies, attitudes, and beliefs of successful learners</li><li>• Reviewing class material, discussing problems, reviewing tests, or working on solutions to problems</li><li>• Facilitating individual and small group tutoring sessions, and classroom visits</li></ul>	

## RESEARCH EXPERIENCE

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<b>Student Researcher at Waubonsee Community College</b> Advisor: Professor Sheela Vemu	<b>Fall 2022 - Aug 2024</b>
<ul style="list-style-type: none"><li>• Leading the study of the immunogenic regions on the spike glycoproteins of the SARS-CoV-2 variants using the web-based bioinformatics platform Immune Epitope Database (IEDB)</li><li>• Optimizing the target antigens' position by developing Python scripts, utilizing immune epitope prediction and analysis codes, statistical interpretation of data, and creating educational materials</li><li>• Mentoring students for their honors project which uses IEDB</li></ul> <i>Jatniel Gomez and Chris Salgado (Students at Waubonsee Community College)</i>	

## HONORS AND AWARDS

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<b>NIIMBL eXperience</b> <i>The National Institute in Manufacturing Biopharmaceuticals</i>	<b>2023</b>
<b>First place at the Illinois Water Environment Association Student Poster Competition (Newsletter)</b> <i>2023 Illinois Wastewater Professionals Conference</i>	<b>2023</b>
<b>Waubonsee Students Recognized on Fall 2020 President's List</b> <i>Waubonsee Community College</i>	<b>2020</b>
<b>The John J. Swalec, Jr. President's Achievement Award</b> <i>Waubonsee Community College</i>	<b>2019</b>
<b>Waubonsee Students Recognized on Fall 2017 President's List</b>	<b>2017</b>

<b>Phenomenal Woman Award</b> <i>“Schekeeta Hart-Burns” Boy’s II MEN</i>	<b>2017</b>
<b>Junior ROTC Award of Merit</b> <i>The Military Order of the World Wars</i>	<b>2017</b>

## CONFERENCES

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Mapped out immunogenic regions in SARS-CoV2 variants to understand vaccine design  
*Poster presentation at the Envision the Next Bioscience Workforce Summit - Washington D.C* **Jun 27, 2023**

Training the Future of the Bioeconomy: Creating Accessible Research Experiences in Protein Engineering  
Using the Immune Epitope Database  
*Poster presentation at PEGS Boston Summit 2023 Conference - Boston, MA* **May 17, 2023**

Mapping Immunogenic Regions in SARS-CoV-2 Variants to Understand Vaccine Design Using Bioinformatics  
Tools  
*Podium Session at 2023 John Saragon Albazi Research and Creative Activities Student Symposium  
- Northeastern Illinois University, Chicago, IL* **Apr 28, 2023**

Mapping Immunogenic Regions in SARS-CoV-2 Variants to Understand PCR Assay Design Using Bioinformatics  
Tools  
*Student poster session at 2023 Illinois Wastewater Professionals Conference - Springfield, IL* **Apr 10, 2023**  
*1st place winner*

## PUBLICATIONS

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[1] Sanchez Rocha, J. A., et al. “Mapping Immunogenic Regions in Sars-cov-2 to Understand Vaccine Design Using Bioinformatics”. Journal of Advanced Technological Education (J ATE), vol. 2, no. 2, Zenodo, Aug. 2023, [doi:10.5281/zenodo.8260361](https://doi.org/10.5281/zenodo.8260361).

[2] Koudjiwan, P., et al. “Predicting Neoantigens for Cancer Using Next-generation IEDB & CEDAR Tools”. Journal of Advanced Technological Education (J ATE), vol. 3, no. 2, Zenodo, Oct. 2024, pp. 47–56, [doi:10.5281/zenodo.13989043](https://doi.org/10.5281/zenodo.13989043).

## CERTIFICATE

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<b>Junior Deputy Certificate</b> <i>Kane County Sheriff’s Office</i>	<b>Summer 2016</b>
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## ACTIVITIES

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### Academic

**J ATE URE Special Project Participant Advanced Technological Education (ATE) Program** **2023- 2024**  
***Paid Program***

- Engaged in hands-on research projects aligned with industry needs, contributing to project design, data collection, and analysis

- Contributed to disseminating research findings through the Journal of Advanced Technological Education (J ATE), while collaborating with faculty and fellow students

**Student organization MEChA / President, Vice-president, Secretary** **2019 - 2021**  
*Waubonsee Community College*

- Opened a chapter at Waubonsee that advocates for Latino students on campus
- Provided resources and support for students' academic success

**Education Awareness Subteam / Student Leader** **2017 - 2018**

- Working in ensuring Waubonsee Community College took proactive action to protect DACA/Undocumented students
- Provided interactive ally training for employees at the college, and students

## Community Services

**The Sideline Project / Co-founder** **2019 - 2021**

- Conducted community events on mental health, academic success, and overall well-being
- Collected data on available scholarships and opportunities for students

**Student Diversity Committee / Student Leader** **2019 - 2020**

*Waubonsee Community College*

- Curating ideas to improve students experience
- Assisted in organizing student events for Latinx Heritage month

## OUTREACH

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**Good Morning Aurora** **2020**

- Served as a special guest to speak about my advocacy work and share my story

**Supporting DACA and Undocumented Students Panelist** **2018**

*Oswego High School*

- Served as a panelist for high school educators to provide guidance in supporting DACA/Undocumented students

## SKILLS

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### Programs of Use

Python

C++

HTML

Git

MATLAB

Mathematica

Visual Studio

Microsoft Word

Microsoft Excel

Photoshop

Google Suit

### Languages

English - Native / Bilingual

Spanish - Native / Bilingual