

RELEVANT EXPERIENCES

Scientific Animator/Business Development Associate, Smart Biology; Toronto, ON — 2024 (*current*)

- Create educational animations that are highly accurate and visually compelling.
- Participating in business development to generate additional revenue and grow client base.

Biomedical Communicator, Baylis Medical Technologies; Mississauga, ON — 2024

- Participated in campaign/project planning, ensuring timely execution within budget and scope.
- Supported positive relationships with internal customers and stakeholders to ensure smooth execution of projects. Provided input on scope and timelines to balance resources and adapt to changing business needs.
- Collaborated closely with Product Management, Marketing, Clinical Education, Digital Marketing, and other internal stakeholders to develop content and creative strategies.

3D Medical Artist, AXS Studio; Toronto, ON — 2023-2024

- Created engaging animations that are on brief, on budget and further the creative vision of the studio.
- Contributed technical knowledge by delivering tech showcases on molecular visualization/modeling using Chimera. Which was utilized in new website marketing campaigns for Vertex.
- Conducted visual research from relevant literature to ensure the accuracy of the visuals.
- Followed company branding and style guidelines while textured, modeled, and animated Mechanism of Action (MoA) animations.

Scientific Animator, the Animation Lab; Salt Lake City, UT — 2018-2023

- Developed original storyboards, 2D/3D illustrations, and animations depicting complex molecular and cellular processes.
- Art-directed the eukaryotic ribosome animation displayed at the Natural History Museum of Utah, celebrating Nobel laureate Venki Ramakrishnan's work.
- Managed the full production cycle independently, from intake meetings to archive, while effectively communicating with scientific collaborators and providing mentorship to team members.

Experiential Instructional Designer, Jump Simulation Center; Peoria, IL — 2016-2018

- Designed and created engaging instructional materials, including interactive eLearning, medical illustrations, and animations using Adobe After Effects and Captivate.
- Developed recommendations for the design of educational materials and activities, including AR/VR modules, ensuring alignment with instructional design principles.

Freelance Medical Illustrator — 2014-Present

- Created visually compelling illustrations in collaboration with a design agency for re-branding of Inozyme Pharma's website.
- Worked collaboratively with the Chief Scientific Officer of NK Gen Biotech to create illustrations for their website and marketing materials and investor slide decks.
- Review scientific materials, branding guidelines, and client goals to fully understand and execute the scientific story, target audience, and messaging for creative deliverables.

Creative and Communications Lead, LifeLearn Inc; Guelph, ON — Feb - July 2016

- Designed brochures and logos for veterinary branding and marketing, utilized at industry conferences.
- Led website re-branding projects for veterinary ultrasound companies, conducting stakeholder interviews and creating wireframes and UI designs.

UI/UX Designer, Boyd Lab, UIC; Chicago, IL — 2013-2015

- Reviewed data to identify gaps in communication and knowledge transfer.
- Conducted user interviews to gather insights for app design, collaborating with stakeholders and programmers to design an award winning app using user-centered design principles.

EDUCATION

University of Illinois at Chicago – Master of Science in Biomedical visualization, 2015

Harvard University – Master of Liberal Arts in Biotechnology, 2013

University of Waterloo – Bachelor of Science, Biochemistry, 2004

SKILLS

- Adobe Creative Suite (Illustrator, Photoshop, InDesign, After Effects, Premiere)
- Autodesk Maya, zBrush, Chimera, Houdini, Blender
- Storyboarding, Concept Art, Art Direction
- 3D Animation, 3D Modeling
- Wireframes & Prototyping
- Graphic Design, UI/UX Design
- Medical Illustration
- Redshift Renderer
- Research & Development
- Marketing,
- Generative AI
- Project Management

PRESENTATIONS & INVITED TALKS

Presenter at Guild of Natural Science Illustrators annual meeting, August 13, 2022

Title: "Molecular Visualization Workflow of the Animation Lab (UCSF Chimera & PDB)"

Panelist on Southern California Young Women in Bio 6th Bio-Influencer Session, April 14, 2021

Horizons in Molecular Biology (Virtual meeting), September 14-17, 2020

14th Career Fair of the International Ph.D. Student Symposium Horizons in Molecular Biology, Max Planck Institute for Biophysical Chemistry

AMI Annual Meeting. July 18-21, 2018, Newton, MA.

Title: "Technology, Design and Growing Opportunities in Simulation-based Education"

American Thoracic Society International Conference. May 18-23, 2018, San Diego, CA

Title: "Gamifying Tobacco-Free Kids: Employing Medical Visualization and Games in Youth Anti-Tobacco Outreach.

Spectrum of Ideas Showcase at IMSH. January 14, 2018, Los Angeles, CA

Title: "Engaging Young Minds: Getting Adolescents Thinking About Health"

Poster Presentation: Crawford SY, Hsu GI, Wirth SM, Cuellar S, Venepalli NK, Nayak AK, Boyd AD.

Patient-centered design in developing mobile application to improve adherence to oral anticancer medications. American Pharmacists Association (APhA) Annual Meeting & Exposition. San Francisco, CA. March 25, 2017.

Poster Presentation at UIC Student Research Forum. April 2, 2015, Chicago, IL

Title: "Design of Customized Mobile Application for Patient Adherence to Oral Anticancer Medications Utilizing User-Centered Design and Animation"

Poster Presentation and Lighting talk at Visualization of Biological Data Meeting.

March 26, 2015, Cambridge, MA

Title: "Communicating Research using Visual Molecular Dynamics (VMD)"

Stenstrom Scholars Presentation at O.A. Parkes Symposium & International Student Conference. March 13, 2015, Augusta, GA

Title: "Molecular Visualization using Visual Molecular Dynamics (VMD)"

Consumer Health Informatics Midwest Conference. Oct 25, 2014, Fort Wayne, IN

Title: "Mobilizing for patient adherence to oral anticancer medications"

SERVICE & MEMBERSHIP

Interaction Design Foundation Member, 2022 – 2023
Vesalius Trust Board, Director, Social Media Committee, June 2022 – present
GNSI online exhibition coordinator, Annual Meeting 2022
American Society for Cell Biology Member, 2019-2020
AMI Annual Conference Workshop Co-Chair, 2019
Association of Medical Illustrators Professional Member, 2013 – 2020
Society for Simulation in Healthcare Member, 2016 – 2017
American Medical Informatics Association Student Member, Jan 2015 – Jan 2016
Association of Medical Illustrators Meeting Student Volunteer, 2014
Treasurer of the Student Association of Medical Artists, UIC, May 2014 – May 2015
Representative on the Harvard Graduate Council, Sep 2012 – Apr 2013

AWARDS & GRANTS

2nd place Cell Bio 2020 image competition video award for animation of TRIM5 α Forming a Lattice around HIV Capsid
ASCB Public Engagement Grant: Finding a Refuge in Visualization: teaching scientific animation to high school students from refugee background. 2020-2021
Science Communication Fellow at Natural History Museum of Utah, 2019-2020
Jump ARCHES grant recipient for KneeVIEW: A Virtual Education Window for Musculoskeletal Training , 2017
Nelva B. Richardson Scholarship from Biomedical Visualization Program at UIC, 2015
UIC Graduate Student Travel Award, 2015
Vesalius Trust Research Grant, 2015
UIC Women In Science and Engineering Graduate Student Research Award Honorable Mention, 2015
Scientific Innovation Team Award for galactose-a-1,3-galactose Project at Momenta Pharmaceuticals, 2010
Award for Team Spirit for Sanofi Pasteur's Melanoma Project, 200

PUBLICATIONS

Sinclair, R., Hsu, G., Davis, D., Chang, M., Rosquete, M., Iwasa, J. H., & Drakakaki, G. Plant cytokinesis and the construction of new cell wall [published online ahead of print, 2022 Jun 13]. *FEBS Lett.* 2022;10.1002/1873-3468.14426.

Nayak S, Liu H, Hsu GI, Iwasa JH. Using 3D Animation to Visualize Hypotheses. *Trends Biochem Sci.* 2020;45(7):633-634.

Crawford SY, Boyd AD, Nayak AK, Venepalli NK, Cuellar S, Wirth SM, Hsu GI. Patient-centered design in developing a mobile application for oral anticancer medications. *J Am Pharm Assoc* (2019). Mar-Apr;59(2S):S86-S95.e1

Hsu GIH, Crawford SY, Paoletta G, Wirth SM, Cuellar S, Venepalli NK, Wang E, Hughes D, and Boyd AD (2017). "Design of Customized Mobile Application for Patient Adherence to Oral Anticancer Medications Utilizing User-Centered Design." *Journal of Biocommunication*, [S.l.], v. 41, n. 1. ISSN 0094-2499.

Bosques CJ, Collins BE, Meador JW III, Sarvaiya H, Murphy JL, Bulik DA, Hsu IH, Washburn N, Sipsey S., Myette JR, Raman R, Shriver Z, Sasisekharan R, and Venkataraman G (2010). "Chinese hamster ovary cells can produce galactose-a-1,3-galactose antigens on proteins." *Nature Biotech.* 28 (11). 1153-1156.