

Richard Posert

CryoEM · Biochemistry · Computation
Scientific communication · Data visualization and design

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Education

2018 – 2023	Ph.D. in biochemistry and molecular biology	Vollum Institute, OHSU, Portland, OR
	<ul style="list-style-type: none">Extensive experience with cryoEM single-particle analysis, focused on small, flexible membrane proteins. Improved best map of ENaC extracellular domain from 3.1 to 2.4 Å.Developed multiple functional assays and automated processing and presentation scripts for each.Developed several software tools, including <i>Appia</i>, a chromatography suite; <i>Exawatcher</i>, a RELION job monitor; and <i>Mortimer</i>, a real-time cryoEM screening processor and organizer.	
2011 – 2015	BA in biochemistry and molecular biology	Reed College, Portland, OR
	Thesis in Janis Shampay's lab: <i>Structural Characteristics of the PinX1 Telomerase Inhibitory Domain</i>	

Publications

- Richard Posert**, Isabelle Baconguis. *Appia: Simpler chromatography analysis and visualization*. In *PLoS ONE*, 2023. doi: [10.1371/journal.pone.0280255](https://doi.org/10.1371/journal.pone.0280255)
- Sigrid Noreng, **Richard Posert**, Arpita Bharadwaj, Alexandra Houser, Isabelle Baconguis. *Molecular principles of assembly, activation, and inhibition in epithelial sodium channel*. In *eLife*, 2020. doi: [10.7554/eLife.59038](https://doi.org/10.7554/eLife.59038)
- Johannes Elferich, **Rich Posert**, Craig Yoshioka, and Eric Gouaux. *HOTSPUR: A Real-time Interactive Preprocessing System for Cryo-EM Data*. In *Microscopy and Microanalysis*, 2019. doi: [10.1017/S1431927619006792](https://doi.org/10.1017/S1431927619006792)
- Sigrid Noreng, Arpita Bharadwaj, **Richard Posert**, Craig Yoshioka, Isabelle Baconguis. *Structure of the human epithelial sodium channel by cryo-electron microscopy*. In *eLife*. doi: [10.7554/eLife.39340](https://doi.org/10.7554/eLife.39340)

Teaching and Service

2022 – 2023	CryoEM Single Particle Analysis Workshops	
	I coordinated and facilitated meetings of cryoEM trainees from multiple labs at OHSU. During these meetings, trainees presented processing problems and we worked together to provide as many potential solutions as we could.	
2022	NEUS 619 - Effective Scientific Presentation	Co-instructor
	I was one of two instructors for the course on scientific speaking and posters, which is required for first-year Neuroscience students at OHSU. I led classes covering topics including talk writing, slide design, audience management, and Q&A sessions.	
2019 – 2022	Biochemistry lectures	Guest lecturer
	I have been invited to give guest lectures for <i>Chem330 - Structural Biochemistry</i> at Lewis and Clark and the structural biochemistry course at Reed.	
2018–2020	AFSCME Local 402	Lead organizer, bargaining team, executive board
	In my role as a lead organizer, I helped grow our union through one-on-one conversations from eight people to over 300, and built systems to manage that growth. I also organized, processed, and communicated the results of issue and priority surveys. As a member of the bargaining team, I was a member of a team of four that wrote and negotiated a contract worth, in total, over \$3,000,000 and coordinated several teams focused on individual issues. As a member of the first e-board, I helped build a governing structure focused on equity and representation.	
2019	CONJ 661 - Structure and Function of Biological Molecules	Teaching assistant
	I coordinated and ran study sessions, journal clubs, and review for the required first-year structural biochemistry course at OHSU.	

Awards and Funding

2019	Program in Enhanced Research Training	NIH T32GM071338-13
2019	Emerging Leader	AFSCME