

# Papa Kobina Van Dyck

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RESEARCH INTERESTS      *Biophysics, Protein Structure and Dynamics, Protein Electrostatics, Protein Engineering, Bioinformatics and Computational Biology, Optical and Fluorescence Microscopy, and Cell Biology*

EDUCATION      **University of Notre Dame (IN)**, *Doctor of Philosophy*      08/2020 - Present  
*Biophysics*  
Advisor: Katharine A. White  
Research: *Characterizing the molecular mechanisms of pH sensitive ionizable residue networks*

**DePauw University (IN)**, *Bachelor of Arts(Hons.)*      08/2016 - 05/2020  
*Cell and Molecular Biology*  
*Minors in Statistics and Physics*  
Advisor: Pascal Lafontant  
Research: *Cauterization as a simple method for regeneration studies in the zebrafish heart*

RELEVANT RESEARCH      **pH Sensitive Proteins and Cell Behaviors**  
Advisor: Katharine A. White - University of Notre Dame (IN)      05/2021 - Present

**Cardiovascular Regeneration Studies in the Zebrafish**  
Advisor: Pascal Lafontant - DePauw University (IN)      08/2017 - 05/2020

**Cellular Environment Effects on Protein Stability and Dynamics**  
Advisor: Emily J. Guinn - DePauw University (IN)      08/2018 - 12/2019

**Neuroimaging Data Science**  
Advisor: Joshua Vogelstein - Johns Hopkins University (MD)      05/2018 - 08/2018

PUBLICATIONS      [1] **Papa Kobina Van Dyck** , *Natasha Hockaden, Emma C Nelson, Alyssa R Koch, Kamil L Hester, Neil Pillai, Gabrielle C Coffing, Alan R Burns, Pascal J Lafontant*. Cauterization as a simple method for regeneration studies in the zebrafish heart *Journal of cardiovascular development and disease* 7 (4), 41

CONFERENCE TALKS      [1] **Characterizing the Molecular Mechanisms of pH Sensitive Ionizable Residue Networks**  
*Notre Dame Biophysics Conference*      10/2022

[2] **Characterizing pH Dependent Ionizable Residue Networks in Undruggable Targets With SH2 Domains**

*26th Annual John V. O'Connor Biochemistry and IBMS Research and Education Conference* 10/2022

[3] **Belonging and Optics of DePauw University's STEM Departments**  
*HSTEM 2021 NSF Conference* 6/2021

POSTER  
PRESENTATIONS

[1] **Characterizing the Molecular Mechanisms of pH Sensitive Ionizable Residue Networks**  
*ND/Purdue MedChem Graduate Symposium 2022* 10/2022

[2] **Characterizing the Molecular Mechanisms of pH Sensitive Ionizable Residue Networks**  
*IU Simon Comprehensive Cancer Center Cancer Conference* 10/2022

[3] **Characterizing pH Molecular Mechanisms of Networks of Ionizable Residues**  
*Midwest Tumor Microenvironment Meeting 2022* 05/2022

[4] **Characterizing pH Molecular Mechanisms of Networks of Ionizable Residues**  
*Chemistry-Biochemistry-Biology Interface Annual Symposium 2022* 05/2022

[5] **Characterizing pH Molecular Mechanisms of Networks of Ionizable Residues**  
*Quantitative Biology Retreat* 04/2022

[6] **Characterizing pH Molecular Mechanisms of Networks of Ionizable Residues**  
*Harper Cancer Research Institute Cancer Research Conference* 03/2022

[7] **Characterizing pH Molecular Mechanisms of Networks of Ionizable Residues**  
*Biophysical Society Annual Meeting 2022* 2/2022

[8] **Characterizing pH Molecular Mechanisms of Networks of Ionizable Residues**  
*AfroBiotech Conference 2021* 10/2021

[9] **Characterizing pH Molecular Mechanisms of Networks of Ionizable Residues**  
*25th Annual John V. O'Connor Biochemistry and IBMS Research and Education Conference* 10/2021

[10] **Belonging and Optics of DePauw University's STEM Departments**  
*HSTEM 2021 NSF Conference* 6/2021

[11] **Examination of the effect of a Histidine tag and pH on the energy landscape of ACBP.**

	<i>Experimental Biology Conference</i>	<i>4/2020</i>
	<i>[12] Cautery Injury Response in Zebra Fish</i> <i>Indiana Physiological Society Annual Meeting</i>	<i>3/2020</i>
	<i>[13] Examination of the effect of a Histidine tag and pH on the energy landscape of ACBP</i> <i>Midwest Conference on Protein Folding, Assemblies, &amp; Molecular Motions</i> <i>5/2019</i>	
	<i>[14] Structure, Development, and Functional Morphology of the Cement Gland of the Giant Danio</i> <i>Indiana Physiological Society Annual Meeting</i>	<i>3/2019</i>
LEADERSHIP & OUTREACH	Being Human in STEM- Notre Dame (Course Planning)	<i>07/2022-Present</i>
	Grad Student Government Stipend Ad Hoc Committee	<i>07/2022-Present</i>
	University Committee for Libraries (Grad Student Representative)	<i>07/2022-Present</i>
	University Council for Academic Technologies(Grad Rep)	<i>07/2022-Present</i>
	Graduate Student Government (Academic Affairs Chair)	<i>06/2022 - Present</i>
	DePauw Alumni Panels- Physics and Mathematics	<i>05/2022</i>
	Biophysics Interview Weekend (Organizer)	<i>02/2022</i>
	Biophysical Society Student Chapter (Co-Founder)	<i>04/2021- Present</i>
	Biophysics Student Selected Seminar Speaker (Organizer)	<i>04/2021</i>
	Black Graduate Student Association (Treasurer)	<i>12/2020 - 09/2022</i>
	Students of Color in STEM (Co-Founder)	<i>8/2018 - 05/2020</i>
	First Year Experience Program	<i>05/2019 - 05/2020</i>
	Being Human in STEM- DePauw Chapter	<i>01/2020 - 05/2020</i>
MENTORING	Elijah Gorski- Washington High School '24	<i>6/2022 - Present</i>
	Eduarda Tartarella- Saint Mary's College'25	<i>6/2022 - Present</i>
	Joshua Abebe- University of Notre Dame'23	<i>10/2022 - Present</i>
ACHIEVEMENTS	<b>Honors and Awards:</b> <i>26th Annual John V. O'Connor Biochemistry and IBMS Research and Education Conference Presentation Award</i>	<i>10/2022</i>

<i>10th Annual Harper Cancer Research Day Poster Contest Award</i>	<i>03/2022</i>
<i>Biophysical Society Travel Grant</i>	<i>11/2021</i>
<i>Prindle Prize (Science Thesis Award)</i>	<i>05/2020</i>
<i>Douglas A. &amp; Phyllis G. Smith Student Faculty Collaborative Award</i>	<i>04/2019</i>
<i>Winner- Science Ethics Bowl</i>	<i>08/2017</i>
<i>Science Research Fellowship</i>	<i>08/2016</i>
<i>Deans List (Fall 2016 - Spring 2020)</i>	

**Scholarships:**

<i>John S. &amp; Dorothy M. Medaris Scholarship</i>	<i>04/2017</i>
<i>Dr. Hakki B Ogelman Endowed Scholarship (Physics Award)</i>	<i>04/2017</i>
<i>Bonner Scholarship</i>	<i>04/2016</i>
<i>Ubben DePauw Trust Scholarship</i>	<i>04/2016</i>

MEMBERSHIPS

*Biophysical Society*  
*American Society for Biochemistry and Molecular Biology*

TEACHING  
EXPERIENCE

**DePauw University (IN)**  
**Teaching Assistant**

*CHEM120: Structure and Properties of Organic Molecules (Fall 2018, Spring 2019, Fall 2019)*

*BIO241: Intermediate Cellular Biology (Spring 2020)*

**Academic Resource Center - Quantitative Tutor**

*Biology- Introductory Courses, Cell Biology, Molecular Biology, Genomics, Bio-statistics, Bioinformatics*

*Chemistry- General Chemistry, Organic Chemistry*

*Physics- Introductory Courses, Modern Physics, Nuclear Physics, Classical Me-chanics*

*Mathematics- Calculus 1-3, Introductory Statistics, Mathematical Statistics, Ex-perimental Design & Statistical Methods, Statistical Computing, Statistical Model Analysis*

Updated: December 22, 2022