Curriculum Vitae

# Petar M. Pajic

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## EDUCATION

| Institution | Degree | Years | Department | Advisor |
|---|---|---|---|---|
| University at Buffalo | B.S. | 2011-2015 | Biological Sciences | Dr. G. Koudelka |
| University at Buffalo | M.S. | 2015-2017 | Biological Sciences | Dr. O. Gokcumen |
| University at Buffalo | Ph.D. | 2020-Present | Biological Sciences | Dr. O. Gokcumen |

## APPOINTMENTS and DEVELOPMENT

2023- Graduate Student Ambassador. Graduate Enrollment Team, University at Buffalo

2022- Treasurer, Biological Sciences Graduate Student Association Board, University at Buffalo

2021- Research Assistant. Evolutionary Biology. Department of Biological Sciences, University at Buffalo

2020-2021 Teaching Assistant. Evolutionary Biology. Department of Biological Sciences, University at Buffalo

2017-2020 Laboratory Associate/Technician. Department of Oral Biology, School of Dental Medicine, University at Buffalo -Dr. Stefan Ruhl

2013-2014 Observership (Clinical). Roswell Park Cancer Institute

2014 Observership (Surgical). Johns Hopkins Hospital

2014 Observership (Clinical/Surgical). R Adams Cowley Shock Trauma Center, University of Maryland -Dr. Branko Bojovic

2013 Undergraduate Researcher. Department of Chemistry, University at Buffalo -Dr. Sarbajit Banerjee

2012-2013 Observership (Clinical/Surgical). Western New York: Ear, Nose, and Throat- Dr. Mark Hoeplinger

## AWARDS AND RECOGNITIONS

2023 **SMBE Young Investigator Travel Award**, SMBE23 Ferrara, Italy

2023 **Celebration of Student Academic Excellence Student Showcase**, University at

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| | Buffalo |
| 2022 | **Best Talk Award,** GLAM-Evogen |
| 2020 | **Radovan and Theresa Bratic Memorial Scholarship**, Serbian National Federation |
| 2020-2022 | **Departmental Fellowship**, Department of Biological Sciences, University at Buffalo |
| 2017 | **Best Poster.** AAPA Conference |
| 2015 | ***Cum Laude.*** Bachelor of Science. University at Buffalo |
| 2014-2015 | **Dean's List.** University at Buffalo |
| 2014 | **TORCH Leadership Award.** University at Buffalo |
| 2011-2015 | NYS Scholarship for Academic Excellence |

## GRANT SUPPORT

2023 Mark Diamond Research Foundation (Graduate Student Association State University of New York, University at Buffalo). PI. $2780. *Elucidating the evolution and biomedical impact of MUC1*.

## PUBLICATIONS

**5 publications, >139 citations as of August 2023 (Google Scholar), h-index=4, i10-index=3.**

Research articles published while at the University at Buffalo

***M.Sc.***

**1. Pajic P.***, Lin Y-L.*, Xu D., Gokcumen, O. (2016). The psoriasis-associated deletion of late cornified envelope genes LCE3B and LCE3C has been maintained under balancing selection since Human Denisovan divergence. **BMC Ecology and Evolution** 16 (1), 265 **[First Author, IF:3.26]**.

***Ph.D.***

**2. Pajic, P.**, Pavlidis, P., Dean, K., Neznanova, L., Daugherity, E., Romano R-A., Garneau, D., Globig, A., Ruhl, S., Gokcumen, O. (2019). Independent amylase gene copy number bursts correlate with dietary preferences in mammals. **eLife.** 8:e44628 [**First Author, Highlighted by an editorial, IF:8.7].**

**3.** Barnard, K. N., Alford-Lawrence, B. K., Buchholz, D. W., Wasik, B. R., LaClair, J. R., Yu, H.,Honce, R., Ruhl, S., **Pajic, P**., Daugherity, E. K., Chen, X., Schultz-Cherry, S. L., Aguilar, H. C.,Varki, A., & Parrish, C. R. (2020). Modified Sialic Acids on Mucus and Erythrocytes Inhibit

Influenza A Virus Hemagglutinin and Neuraminidase Functions. **Journal of Virology**, 94(9),e01567-19 **[IF:6.2]**

**4. Pajic, P.**, Shen, S., Qu, J., May, A. J., Knox, S., Ruhl, S., & Gokcumen, O. (2022). A mechanism of gene evolution generating mucin function. **Science Advances**, 8(34), eabm8757. **[First Author, IF:14.14]**

**5.** Veilleux C.C.*, Garrett, E.C.*, **Pajic, P.*,** Saitou, M., Dominy, N.J., Perry, G.H., Gokcumen, O., Melin, A.D. (2023) Human subsistence and signatures of selection on chemosensory genes. Communications Biology, 6(683), **[Co-First Author, IF: 6.5]**

Research Press Highlights

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| 2019 | Pajic et al. Amylase copy number analysis in several mammalian lineages reveals convergent adaptive bursts shaped by diet. *Press release:* http://www.buffalo.edu/ubnow/stories/2019/05/amylase.html; *Selected highlights in eLife Insights, Futurity, Inverse, and National Science Foundation 4 Awesome Discoveries You Probably Didn't Hear About This Week* |
| 2022 | Pajic et al. A mechanism of gene evolution generating mucin function. *Press release:* https://www.buffalo.edu/news/releases/2022/08/023.html; *Selected highlights in BBC Inside Science, NSF News From the Field, The Conversation, Inverse, Popular Science, New Scientist, Discover* |

## PRESENTATIONS and POSTERS

(presenter is underlined)

***Posters***

Yeng Lung-Lin, Muthukrishnan Eaaswarkhant, **Petar Pajic**, Duo Xu, Margarita Rzhetskaya, Geoffrey Hayes, Ran Blekhman, Nina Jablonski, and Omer Gokcumen. (2017). Complex adaptive forces shape skin barrier evolution in humans. American Association of Physical Anthropologists Annual Meeting.

Kirsten Dean, **Petar Pajic**, Stefan Ruhl, Omer Gokcumen. (2018). Independent bursts of amylase copy number.

**Petar Pajic**, Shichen Shen, Jun Qu, Alison May, Sarah Knox, Stefan Ruhl, Omer Gokcumen. (2021) De novo mucins in mammals: How parallel evolution of exonic repeats leads to new function. American Society of Human Genetics Annual Meeting. Virtual

Sophia Jacobs, **Petar Pajic**, Omer Gokcumen. (2022). ACOT Gene Family Copy Number

Correlates With Metabolic Rates in Mammals. REU Biology. Buffalo, NY

Valerie Reyes Ortiz, **Petar Pajic**, Omer Gokcumen. (2022). Validation of amylase copy number variation predicted by optical mapping and long read sequencing. REU Chemistry. Annual Biomedical Research Conference for Minoritized Scientists (ABRCMS). Anaheim, California. Poster Presentation Award

Shika Jain, Shichen Shen, Jun Qu, **Petar Pajic**, Omer Gokcumen, Stefan Ruhl (2023). Comparative Analysis of Saliva Proteomes of Humans and Non-Human Primates. Gordon Research Conference: Salivary Glands and Exocrine Biology. Ventura, California

**Petar Pajic**, Shichen Shen, Jun Qu, Alison May, Sarah Knox, Stefan Ruhl, Omer Gokcumen. (2023). A mechanism of gene evolution generating mucin function. Gordon Research Conference: Salivary Glands and Exocrine Biology. Ventura, California

**Petar Pajic**, Shichen Shen, Jun Qu, Alison May, Sarah Knox, Stefan Ruhl, Omer Gokcumen. (2023). A mechanism of gene evolution generating mucin function. Gordon Research Conference: Society of Molecular Biology and Evolution. Ferrara, Italy

***Invited Talks***

2022 Department of Biological Sciences Research Showcase, University at Buffalo

2022 Undergraduate Biology Association, University at Buffalo

2023 AADOCR, GenNext: The Future of Salivary Research, Portland. Oregon

2023 Student Academic Excellence Student Showcase, University at Buffalo

***Talks***

2021 ESEB: Satellite Meeting on ‘Tandem Repeats: methods and roles in molecular evolution'. Abstract: *Parallel evolution of mucins through repeat expansions*

2021 Biological Sciences Symposium, University at Buffalo: Abstract: “A novel mechanism of gene evolution”

2022 Great Lakes Annual Meeting of Evolutionary Genomics: Abstract: “A novel mechanism of gene evolution”. Best Talk Award

## JOURNAL REVIEWERSHIP

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| 2021 | Scientific Reports (1) |
| 2021 | Czech Journal of Animal Science (1) |
| 2021 | BMC Ecology and Evolution (1) |
| 2022 | PLOS One (1) |
| 2022 | Clinical Oral Investigations (2) |
| 2023 | Nucleic Acids Research (1) |

## VOLUNTEER INVOLVEMENT

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| 2021 | SerbFest General Chairman |
| 2019- | Serbfest Chair of Advertisement And Music |
| 2019- | Parish Council Member |
| 2014- | Church Men's Club |
| 2014- | Church Fundraisers: Bake Sale, Fish Fry |
| 2008- | Church Choir |
| 2022 | UB Biological Sciences Open House |
| 2023 | UB Biological Sciences Annual Symposium Co-Organizer |
| 2023 | UB Biological Sciences Happy Hour Coordinator |
| 2023 | UB Biological Sciences Career Day Coordinator |