Jaime J. Castrellon, Ph.D.

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ACADEMIC APPOINTMENTS

Starting 2024 University of California, Los Angeles

Assistant Professor, Department of Psychology

EDUCATION & TRAINING

2022 – Present	Postdoctoral Researcher, NIH K00 Fellow University of Pennsylvania
2017 – 2022	PhD, Psychology & Neuroscience (Cognition and Cognitive Neuroscience) Duke University Dissertation: Dopaminergic mechanisms of individual differences in the discounting and subjective value of rewards (<u>link</u>)
2010 – 2014	BA, cum laude, Neuroscience; Political Science University of Southern California

RESEARCH POSITIONS

2016 – 2017	Laboratory Manager, Cognitive & Clinical Neuroscience Lab UCLA, Los Angeles, CA Principal Investigator: Katherine Karlsgodt
2014 – 2016	Research Analyst & Study Coordinator, Affective Neuroscience Lab Vanderbilt University, Nashville, TN Principal Investigator: David Zald
2012 – 2014	Research Assistant, Emotion & Cognition Lab University of Southern California, Los Angeles, CA Principal Investigator: Mara Mather

PUBLICATIONS Scholar Metrics

^{*} indicates undergraduate research mentee

^{17.} **Castrellon, J.J.,** Seaman, K.L., Zald, D.H., Samanez-Larkin, G.R. (2023). Adult age-related differences in susceptibility to social conformity pressures in self-control over daily desires. *Psychology and Aging*. link, preprint link, data/code

- Castrellon, J.J., Hakimi, S., Parelman, J.M., Lin, Y., Law, J.R., Skene, J.A.G., Ball, D.A., Malekpour, A., Beskind, D., Vidmar, N., Pearson, J.M., Skene, J.H.P., Carter, R.M. (2022). Social cognitive processes explain bias in juror decisions. *Social Cognitive and Affective Neuroscience*. link,, data/code, neurovault, preregistration
- Castrellon, J.J., Hakimi, S., Parelman, J.M., Lin, Y., Law, J.R., Skene, J.A.G., Ball, D.A., Malekpour, A., Beskind, D., Vidmar, N., Pearson, J.M., Carter, R.M., Skene, J.H.P (2022). Neural support for contributions of utility and narrative processing of evidence in juror decision making. *Journal of Neuroscience*, 42 (40), 7624–7633. link, preprint link, data/code, neurovault, preprint link, data/code, neurovault, preprint link, data/code, neurovault, neurovault, neurovault, neurovault, neurovault, neurovault, neurovault, neurovault, neurovault, neurovault, neurovault,
- 14. **Castrellon, J.J.,** *Meade, J., *Greenwald, L., *Hurst, K., Samanez-Larkin, G.R. (2021). Dopaminergic modulation of reward discounting in healthy rats: a systematic review and meta-analysis. *Psychopharmacology*, 238,711–723. <u>link, preprint, data/code, preregistration</u>
- 13. Botvinik-Nezer, R., Holzmeister, F., Camerer, C.F., Dreber, A., Huber, J., Johannesson, M., Kirchler, M., Iwanir, R., Mumford, J.A., ... Castrellon, J.J., ..., Samanez-Larkin, G.R., ..., Nichols, T., Poldrack R., Schonberg, T. (2020). Variability in the analysis of a single neuroimaging dataset by many teams. *Nature*. link, preprint, data/code, preregistration
- 12. Burr, D.A., **Castrellon, J.J.,** Zald, D.H., Samanez-Larkin, G.R. (2020). Emotion dynamics across adulthood in everyday life: older adults are more stable in their affective experiences and better at regulating desires. *Emotion*. <u>link</u>, <u>preprint</u>, <u>data/code</u>
- Juarez, E.J., Castrellon, J.J., Green, M.A., Crawford, J.L., Seaman, K.L., Smith, C.T., Dang, L.C., Matuskey, D., Morris, E., Cowan, R.L., Zald, D.H., Samanez-Larkin, G.R. (2019). Reproducibility of the correlative triad among aging, dopamine, and cognition. *Psychology and Aging*, 34(7), 921–932. <u>link</u>, preprint, data/code, neurovault
- Castrellon, J.J., Young, J.S., Dang, L.C., Cowan, R.L., Zald, D.H., Samanez-Larkin, G.R., (2019). Mesolimbic dopamine D2 receptors and neural representations of subjective value. *Scientific Reports*, 9, 20229. link, preprint, data/code, neurovault, openneurovault.
- Seaman, K.L., Smith, C.T., Juarez, E.J., Dang, L.C., Castrellon, J.J., Burgess, L.L., San Juan, M.D., Kundzicz, P.M., Cowan, R.L., Zald, D.H., Samanez-Larkin, G.R. (2019). Differential regional decline in dopamine receptor availability across adulthood: Linear and nonlinear effects of age. *Human Brain Mapping*, 40(10), 3125-3138. link, preprint, data/code
- 8. **Castrellon, J.J.,** Seaman K.L., Crawford, J.L., Young, J.S., Smith, C.T., Dang, L.C., Hsu, M., Cowan, R.L., Zald, D.H., Samanez-Larkin, G.R. (2019). Individual differences in dopamine are associated with reward discounting in clinical groups but not in healthy adults. *Journal of Neuroscience*, 39 (2), 321–332. link, preprint, data/code, neurovault. **Cover Article.
- 7. Dang, L.C., Samanez-Larkin, G.R., **Castrellon, J.J.**, Perkins, S.F., Cowan, R.L., Zald, D.H. (2018). Individual differences in dopamine D2 receptor availability correlate with reward valuation. *Cognitive, Affective, & Behavioral Neuroscience*, 18(4), 739–747. link
- 6. Seaman, K.L., Brooks, N., Karrer, T., **Castrellon, J.J.**, Perkins, S.F., Dang, L.C., Hsu, M., Zald, D.H., Samanez-Larkin, G.R. (2018). Subjective value representations during effort, probability, and time discounting across adulthood. *Social Cognitive and Affective Neuroscience*, 13(5), 449–459. <a href="https://link.google.com/
- Dang, L.C., Samanez-Larkin, G.R., Smith, C.T., Castrellon, J.J., Perkins, S.F., Cowan, R.L., Claassen, D.O., Zald, D.H. (2018). FTO affects food cravings and interacts with age to influence agerelated decline in food cravings. *Physiology & Behavior*, 192, 188–193. <u>link</u>

- 4. Dang, L.C., Samanez-Larkin, G.R., **Castrellon, J.J.**, Perkins, S.F., Cowan, R.L., Newhouse, P.A., Zald, D.H. (2017). Spontaneous eye blink rate (EBR) is uncorrelated with dopamine D2 receptor availability and unmodulated by dopamine agonism in healthy adults. *eNeuro*, 4(5). <u>link</u>
- 3. Barber, S.J., **Castrellon, J.J.**, Opitz, P., & Mather, M. (2017). Younger and older adults' collaborative recall of shared and unshared emotional pictures. *Memory & Cognition*, 45(5), 716-730. <u>link</u>, <u>data</u>
- 2. Dang, L. C., **Castrellon, J.J.,** Perkins, S. F., Le, N. T., Cowan, R. L., Zald, D. H., & Samanez-Larkin, G. R. (2017). Reduced effects of age on dopamine D2 receptor levels in physically active adults. *NeuroImage, 148, 123-129.* <u>link, data</u>
- 1. Dang, L.C., Samanez-Larkin, G.R., **Castrellon, J.J.**, Perkins, S.F., Cowan, R.L., Zald, D.H. (2016). Associations between dopamine D2 receptor availability and BMI depend on age. *NeuroImage, 138,* 176-183. link

MANUSCRIPTS IN PREP

Castrellon, J.J., Hsu, M., Zald, D.H., Samanez-Larkin, G.R. (*In prep*). Dopamine and preferences for equal payoffs. Society for Neuroeconomics conference poster link

Chang, L.J., Li, X., Nguyen, K., Ranger, M., Begunova, L., Chen, P-H. A., **Castrellon, J.J.,** Samanez-Larkin., G.R., Zald, D.H., Fareri, D.S., Delgado, M.R., Tomova, L.A. (*Under review*). A neural signature of reward. preprint link, data/code

Castrellon, J.J., Young, J.S., Dang, L.C., Smith, C.T., Cowan, R.L., Zald, D.H., Samanez-Larkin, G.R. (*In revision*). Dopamine biases sensitivity to personal goals and social influence in self-control over everyday desires. preprint link, data/code

CONSORTIA CONTRIBUTIONS AND OPEN DATA SHARING

- 2. Richie-Halford, A., Cieslak, M., ... **The Fibr Community Science Consortium**, Satterthwaite, T., Rokem, A. (2022). An open, analysis-ready, and quality-controlled resource for pediatric brain white-matter research. *Scientific Data*. link, preprint link, data/code
- 1. **Castrellon, J.J.,** Young, J.S., Dang, L.C., Cowan, R.L., Zald, D.H., Samanez-Larkin, G.R., (2019). OpenNeuro dataset from 25 healthy young adults' fMRI and dopamine [18F]Fallypride PET images. <u>link</u>

GRANTS & FELLOWSHIPS

NIMH/NIH K00MH134675 Castrellon (PI)

2022 - 2026

Neural mechanisms of sustained and transient hierarchy on social decision making K00 Continuation of Blueprint Diversity Specialized Predoctoral to Postdoctoral Advancement in Neuroscience (D-SPAN) Award (<u>F99/K00</u>) supporting postdoctoral research on the neural processes driving integration of dynamic social information in social decisions.

Direct Costs: \$318,760

Role: PI

NINDS/NIH F99NS120412

Castrellon (PI)

2021 - 2022

Dopaminergic modulation of social decision making

F99 phase of Blueprint Diversity Specialized Predoctoral to Postdoctoral Advancement in Neuroscience (D-SPAN) Award ($\underline{\text{F99/K00}}$) supporting graduate school research on the relationship between individual

differences in human dopamine function and social decision making and related neural mechanisms of

social decisions.

Impact Score: 11

Direct Costs: \$43,967

Role: PI

Duke University Castrellon, Samanez-Larkin, Gaither (MPI) 2020 – 2021

Computational methods to characterize the makeup of university faculty across the United States Competitive departmental research grant to identify patterns of systemic racial bias in academic departments. The outcome of this research will support several projects geared toward efforts to increase representation and equity in the academic workforce. [project details link]

Role: PI \$4,920

Duke University Castrellon/Samanez-Larkin (Co-PI) 2018 – 2020

Using Neuroscience to Optimize Digital Health Interventions across Adulthood

Competitive internal grant to test whether neuroimaging can predict and optimize mobile messaging with social features to motivate physical activity. The outcome of this research will support a larger R01 application to evaluate the neural basis of motivation for healthy behaviors. [project details link]

Role: Co-PI \$50,000 + \$36,000 supplement

NSF 1655445 Skene (PI) 2017 – 2020

Computational Modeling of Decision Making by Prosecutors and Jurors in Criminal Justice Research grant to support studies examining cognitive and neural mechanisms of jurors' biased decisions about guilt and punishment in mock criminal scenarios.

Role: Trainee \$349,995

NSF DGE-1644868 Castrellon (PI) 2017 – 2021

National Science Foundation Graduate Research Fellowship

Independent fellowship to support training in decision making research in preparation for an academic

career.

Role: PI \$102,000

RESEARCH TALKS

2023	Department of Psychology University of California, Los Angeles, CA
2022	Center for Cognitive Neuroscience, Duke University, Durham, NC
2021	Aging Well Lab (PI: Kendra Seaman) The University of Texas at Dallas, Dallas, TX
2021	Social and Affective Neuroscience Lab (PI: Oriel FeldmanHall) Brown University, Providence, RI
2021	Neuroeconomics Forum, Yale University, New Haven, CT
2021	Intergroup Neuroscience Lab (PI: Mina Cikara), Harvard University, Cambridge, MA
2021	Integrative Decision Neuroscience Lab (PI: Joe Kable), University of Pennsylvania, Philadelphia, PA

2020	Society for Neuroeconomics (Spotlight Talk), Virtual Conference
2020	Center for Cognitive Neuroscience, Duke University, Durham, NC
2019	Society for Neuroeconomics (Spotlight Talk), Dublin, Ireland
2018	Society for Neuroeconomics (Spotlight Talk), University of Pennsylvania, Philadelphia, PA
2018	Department of Psychology & Neuroscience, Duke University, Durham, NC
2016	Interdisciplinary Symposium on Decision Neuroscience, Temple University, Philadelphia, PA

SELECTED CONFERENCE PRESENTATIONS

Castrellon, J.J., Crawford, J.L., Hsu, M., Samanez-Larkin, G.R. Individual differences in extrastriatal dopamine D2-like receptors shape strategic social learning. Poster presented at the annual meeting of the Society for Neuroeconomics. Arlington, VA. October 2022.

Leong, J.K., Ellis, E., **Castrellon, J.J.,** Samanez-Larkin, G.R. Structural coherence of dopamine projections to the nucleus accumbens (NAcc) is associated with greater dopamine reception. Poster presented at the annual meeting of the Social Affective Neuroscience Society. Virtual. May 2022.

Castrellon, J.J. Moral arguments shape United States Supreme Court decisions. Poster for the annual meeting of the Society of Personality and Social Psychology. February 2022.

*King, K., *Ilsley, A., **Castrellon, J.J.,** Zald, D.H., Samanez-Larkin, G.R. Subjective responses to amphetamine are related to fMRI anticipatory responses to monetary rewards in the ventromedial prefrontal and orbitofrontal cortex. Poster presented at the annual meeting of the Social Affective Neuroscience Society. Virtual. May 2021. **Best Poster Award Winner

Castrellon, J.J., Hsu, M., Zald, D.H., Samanez-Larkin, G.R. Dopamine and preferences for equal payoffs. Spotlight poster presented at the annual meeting of the Society for Neuroeconomics. Virtual. October 2020.

*Ilsley, A., **Castrellon, J.J.,** Zald, D.H., Samanez-Larkin, G.R. Ventral striatum dopamine transporter availability is related to fMRI activation during reward receipt but not anticipation. Poster presented at the annual meeting of the Society for Neuroeconomics. Virtual. October 2020.

Castrellon, J.J., Skene, J.H.P., Yin, L., Hakimi, S., Parelman, J.M., Law, J.R., Skene, J.A.G., Ball, D., Malekpour, A., Pearson, J.M., Carter, R.M. Language and recall regions of the brain track evidence of guilt in mock criminal scenarios. Poster presented at the annual meeting of the Society for Neuroeconomics. Dublin, Ireland. October 2019.

Castrellon, J.J., Zald, D.H., Samanez-Larkin, G.R., Individual differences in dopamine predict self-control of everyday desires. Spotlight poster presented at the annual meeting of the Society for Neuroeconomics. Dublin, Ireland. October 2019. **Best Poster Award Winner

^{*} indicates undergraduate research mentee

- *Camejo-Coffigny, M., Castrellon, J.J., *Benitez, C., Armora, E., Samanez-Larkin, G.R. Self-efficacy, depressive symptoms, and the pursuit of physical health rewards. Poster presented at the annual meeting of the Society for Neuroeconomics. Dublin, Ireland. October 2019.
- *Johnson, Carlton P., **Castrellon, J.J.,** Crawford, J.L., Samanez-Larkin, G.R., I like it like that: reward discounting and appetitive responses to amphetamine in a drug-naïve sample of healthy adults. Poster presented at the annual meeting of the Society for Neuroeconomics. Dublin, Ireland. October 2019.
- *Benitez, C., **Castrellon, J.J.,** Brewington, M., *Camejo-Coffigny, M., Armora, E., *Bendeck, A., Rao, U., Abiodun, S., Green, M.A., Juarez, E.J., Brown, C., Seaman, K., Falk, E., Samanez-Larkin, G.R. Behavioral and neural predictors of the effectiveness of mobile digital health message framing. Poster presented at the annual meeting of the Society for Neuroeconomics. Dublin, Ireland. October 2019.
- **Castrellon, J.J.,** Dang, L.C., Smith, C.T., Cowan, R.L., Zald, D.H., Samanez-Larkin, G.R., Latent organization of dopamine D2 receptors. Poster presented at the annual meeting of the Organization for Human Brain Mapping. Rome, Italy. June 2019.
- *Meade, J., *Greenwald, L., *Hurst, K., **Castrellon, J.J.**, Samanez-Larkin, G.R., The effect of dopamine drugs on reward discounting: A systematic review and meta-analysis. Poster presented at the annual meeting of the Society of Biological Psychiatry. Chicago, IL. May 2019.
- **Castrellon, J.J.,** Young, J.S., Dang, L.C., Smith, C.T., Cowan, R.L., Zald, D.H., Samanez-Larkin, G.R., Individual differences in dopamine support self-control of everyday desires. Poster presented at the annual meeting of the Social Affective Neuroscience Society. Miami, FL. May 2019.
- **Castrellon, J.J.,** Samanez-Larkin, G.R., Parsing the role of dopamine in reward discounting and subjective valuation. Spotlight poster presented at the annual meeting of the Society for Neuroeconomics. Philadelphia, PA. October 2018. **Best Poster Award Winner
- **Castrellon, J.J.,** Dang, L.C., Young, J.S., Zald, D.H., Samanez-Larkin, G.R., Individual differences in dopamine D2 receptors and neural representations of subjective reward value. Poster presented at the annual meeting of the Cognitive Neuroscience Society. Boston, MA. March 2018.
- **Castrellon, J.J.,** Karlsgodt, K.H., Diffusion-imaging derived cell density in the nucleus accumbens core predicts delay discounting in humans. Poster presented at the annual meeting of the Society for Neuroscience. Washington, D.C. November 2017.
- **Castrellon, J.J.**, Dang, L.C., Perkins, S.F., Samanez-Larkin, G.R., Zald, D.H., Aging contributes to grey matter volume and attentional impulsivity correlates in frontoparietal functional connectivity. Poster presented at the annual meeting of the Society for Neuroscience. Chicago, IL. October 2015.
- **Castrellon, J.**, Ponzio, A., Faskowitz, J., Mather, M., The impact of caloric restriction on subcortical structures. Poster presented at the annual meeting of the Western Psychological Association. Portland, OR. April 2014.

AWARDS

2024	Association for Psychological Science Rising Star
2021	Dean's Award for Excellence in Mentoring, Duke University
2020	Bass Connections Award for Outstanding Mentorship, Duke University
2019	Best Poster Award, Society for Neuroeconomics
2019	Fall Charles Lafitte Foundation Graduate Travel Award, Duke University
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2019	Summer Charles Lafitte Foundation Graduate Travel Award, Duke University
2019	Duke University Vertical Integration Program (\$2,200)
2018	Best Poster Award, Society for Neuroeconomics
2018	Student Travel Award, Society for Neuroeconomics
2018	Duke Summer Research Fellowship Award
2013 & 2012	USC Summer Undergraduate Research Fund Grant (\$2,500)
2012	USC Student Opportunities for Academic Research Grant (\$1,000)
2011 – 2013	Rose Hills Foundation Tuition Scholarship Award for Science and Engineering
2011	USC Academic Achievement Award
2011	USC Jessie Ingram Endowed Scholarship Award
2011	Xerox Hispanic Association for Professional Advancement Scholarship Award
2010 – 2013	USC Latino Alumni Association Scholarship Award
2010 – 2013	Congressional Hispanic Caucus Institute Scholarship Award

TRAINING FELLOWSHIPS

Summer Institute for Cognitive Neuroscience sponsored by The Kavli Foundation. University of California, Santa Barbara, Santa Barbara, CA. June 2019.

Neuroimaging Analysis Reproducibility Workshop sponsored by the Laura & John Arnold Foundation. University of North Carolina, Chapel Hill. Chapel Hill, NC. December 2017.

Summer School in Social Neuroscience & Neuroeconomics, sponsored by the Scientific Research Network on Decision Neuroscience and Aging (SRNDNA). Duke University. Durham, NC. August 2017.

SRNDNA Tools of the Trade Workshop. University of California, Los Angeles. March 2017.

Mortimer D. Sackler, M.D. Summer Institute Fellowship, presented by the Sackler Institute of Developmental Psychobiology at Weill Cornell Medical College. New York, NY. July 2016.

Judicial Seminar on Emerging Issues in Neuroscience sponsored by the American Association for the Advancement of Science. Vanderbilt University, Nashville, TN. May 2016.

MENTORING

*recipient of undergrad research grant/fellowship, +capstone/honors project mentee, #NSF REU Intern

Geshi Yeung+, BA in Cognitive Science, Computer Science, UPenn 2023

Victoria Stancampiano-Metry*#, BA in Psychology, Criminology, Forensic Studies, Fort Lewis College 2023

Rebeca Alvarado Ortego*#, BA in Psychology, Arizona State University 2021

Annie Ilsley*+, BS in Neuroscience, Duke 2022

Kelsi King*+, BS in Neuroscience, Duke 2021

Melanie Camejo Coffigny*+, BS in Neuroscience, BA in Gender, Sexuality & Feminist Studies, Duke 2020

Christian Benitez*+, BS in Neuroscience, Duke 2021

Carlton Johnson*+, BS in Neuroscience, Duke 2020

Alexander Bendeck*, Dual BA in Computer Science and Statistical Science, Duke 2021

Katlyn Hurst*, BS in Biology, Duke 2021

Lucy Greenwald*, BS in Biology, Duke 2020

James Meade*+, BS in Chemistry, Duke 2020

TEACHING

2023	Guest Lecture, "The social brain in the courtroom," The Social Brain, University of Pennsylvania
2023	Guest Lecture, "Dopamine and self-control within and beyond the lab," Neuroeconomics, University of Pennsylvania
2022	Guest Lecture, "Juror Decision Making," Decision Science, Mount Holyoke College
2020	Guest Lecture, "Developmental Cognitive Neuroscience," Developmental Psychology, Duke University.
2020	Teaching Assistant, Duke University Developmental Psychology (PSY 103D), <u>Evals</u>
2020	Guest Lecture, "Positron Emission Tomography" Contemporary Neuroscience Methods, Duke University.
2020	Teaching Assistant, Duke University Contemporary Neuroscience Methods (PSY 313/NEUROSCI 376), Evals
2019	Guest Lecture, "Affective Neuroscience" Introduction to Cognitive Neuroscience
2019	Teaching Assistant, Duke University, Intro to Cognitive Neuroscience (PSY 257/NEUROSCI 212), <u>Evals</u>
2019	Teaching Assistant, Duke University, Introduction to Statistical Methods in Psychological Science (PSY 201L), <u>Evals</u>

SERVICE, OUTREACH, & CONTRIBUTIONS SUPPORTING EQUITY, DIVERSITY, & INCLUSION

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Organizer and Programming Chair, Mind DivE In (Diversity and Equity in the Mind Sciences) University of Pennsylvania
Panelist, "Experiential Learning," Board of Trustees Meeting. Duke University
Lecturer. Summer Training in Academic Research. Clinical Research Institute. Duke University.
Panelist, "What I wish I had known about doing a PhD," <u>Growing up in Science</u> . New York University.
Panelist, "Expansion of Experiential Learning," Association of American Universities Ph.D. Education Initiative Meeting. Duke University.
Panelist, "Interdisciplinary Project Management," Grad Academy. Duke University.
Mentor, Cognitive Neuroscience Research Internship. Duke University.
Mentor, <u>Lifespan Approaches to Diverse Psychological Science</u> , NSF REU. Duke University.
Mentor, Graduate School Mentorship Initiative, Científico Latino.
Graduate Student Representative, Center for Cognitive Neuroscience. Duke University.
Co-author, Concrete Steps for Recruiting, Supporting, and Advancing Underrepresented Minoritized Scientists.
Co-author, <u>Mentoring Handbook</u> , Department of Psychology & Neuroscience, Duke University.
Discovery Day, Duke Institute for Brain Sciences. Duke University.
Mentor, First-generation Mentorship Program, Duke F1RSTS. Duke University.

PRESS

Department of Psychology & Neuroscience, Duke University. (2019). Coverage of research presentation.

Way, K. (2019). 'Dopamine Fasting' Is the Newest 'Sounds Fake, but OK' Wellness Trend. Vice Media.

AD-HOC REVIEWING

Brain and Behavior; Cerebral Cortex; Cognition; Journal of Gerontology: Psychological Sciences; Journal of Neuroscience; Nature Communications; Neuroimage; Neurobiology of Aging; Neuropsychologia; Scientific Reports; Social Cognitive and Affective Neuroscience; Translational Psychiatry

PROFESSIONAL AFFILIATIONS

Association for Psychological Science; Society for Neuroscience; Social Affective Neuroscience Society; Society for Neuroeconomics

Last Updated: 09/14/2023