

Positions

2020 - Post-Doctoral Research Fellow, NYU Langone Health
Department of Child & Adolescent Psychiatry

Education

2014 - 2020 PhD, Columbia University
Department of Psychology, advisor: Nim Tottenham, Ph.D.
2017 M. Phil. in Psychology, Columbia University
2016 M.A. in Psychology, Columbia University
2012 B.A., Dartmouth College, *summa cum laude*
Major: Neuroscience with High Honors

Honors & Awards

2018 Sandra G. Wiener Student Investigator Award,
International Society for Developmental Psychobiology
2017 Columbia Graduate School of Arts and Sciences Travel Award
2016, 2017 International Society for Developmental Psychobiology Travel Award
2012 Phi Beta Kappa, Top 10% of graduating class, Dartmouth College
2012 High Honors in Neuroscience, Dartmouth College
2011 Rufus Choate Scholar, Top 5% of Junior class, Dartmouth College

Fellowships & Grants

2018-2019 Individual Pre-doctoral National Research Service Award, NIMH
Sponsor and Co-Sponsor: Nim Tottenham, Daphna Shohamy
Title: *Neurobehavioral mechanisms of persistence to setbacks in children with early caregiving adversities.*

2018 Elizabeth Munsterberg Koppitz Dissertation Fellowship in Child Development,
American Psychological Foundation
Title: *Neurobehavioral mechanisms of persistence to setbacks in children with early caregiving adversities.* Research funds awarded: \$24,275

2014-2017 National Science Foundation Graduate Research Fellowship Award

2011 Undergraduate Research Grant, Richter Memorial Fund Award,
Dartmouth College

Publications

Callaghan, B.L., Meyer, H., Opendak, M., **VanTieghem, M.**, Harmon, C., Li, A., Sullivan, R., Lee, F., Tottenham, N. (2019). The Developmental Ecology of Fear Neurobiology: Scaffolding by Parents. *Annual Reviews in Clinical Psychology*. doi: 10.1146/annurev-clinpsy-050718-095727

- Hwang, S., Meffert, H., White, S.F., **VanTieghem, M.**, Sinclair, S., Bookheimer, S.Y., Blair, R.J.R. (2018). Dysfunctional Social Reinforcement Processing in Disruptive Behavior Disorders: an fMRI study. *Clinical Neuropsychopharmacology and Neuroscience*, 16(4):449-460. doi: 10.9758/cpn.2018.16.4.449
- Meffert, H., Penner, E., **VanTieghem, M.**, Sypher, I., Leshin, J., Blair, R. J. R. (2018). The role of ventral striatum in reward-based attentional bias. *Brain Research*, 1689:89-97. doi: 10.1016/j.brainres.2018.03.036
- Hwang, S., Meffert, H., **VanTieghem, M.**, Sinclair, S., Bookheimer, S.Y., Blair, R.J.R. (2017). Neurodevelopmental changes in social reinforcement processing: an fMRI study. *Clinical Neuropsychopharmacology and Neuroscience*. 15(4):369-381. doi: 10.9758/cpn.2017.15.4.369.
- VanTieghem, M.**, Gabard-Durnam, L., Flannery, J., Goff, B., Humphreys, K.H, Telzer, E., Caldera, C., Louie, J., Shapiro, M., Bolger, N., Tottenham, N. (2017). Positive valence bias and parent-child relationship security moderate the association between early institutional care and internalizing problems. *Development and Psychopathology*. 29(2):519-533. doi: 10.1017/S0954579417000153
- VanTieghem, M.** & Tottenham, N. (2017). Neurobiological programming of early life stress: functional development of amygdala-prefrontal circuitry and vulnerability for stress related psychopathology. *Current Topics in Behavioral Neurosciences*. Doi 10.1007/7854_2016_42
- White, S.F., **VanTieghem, M.**, Brislin, S.J., Sypher, I., Sinclair, S., Pine, D.S., Hwang, S., Blair, R.J.R. (2016). Neural correlates of the propensity for retaliatory behavior in youth with disruptive behavior disorders. *Am J Psychiatry*, 173(3):282-90.
- Hopkins, M.E., Davis, F.C., **VanTieghem, M.**, Whalen, P.J., and Bucci, D. (2012). Differential Effects of Acute and Regular Physical Exercise on Cognition and Affect. *Neuroscience*, 215:59-68.

In Progress

- VanTieghem M.**, Korom, M., Flannery, J., Choy, T., Caldera, C., Gabard-Durnam, L., Goff, B., Gee, D., Humphreys, K., Telzer, E., Shapiro, M., Louie, J. Y., Fareri, D., Bolger, N., Tottenham, N. (*submitted*). Longitudinal changes in amygdala, hippocampus, and cortisol development following early caregiving adversity. <https://psyarxiv.com/yp5h2/>
- Bloom, P., Douglas, I., **VanTieghem, M.**, Callaghan, C., Tottenham, N. Predicting mental health risk in primary care settings: A rapid gastrointestinal screener for mental health outcomes in youth (*submitted*).
- Silvers, J., Callaghan, B., **VanTieghem, M.**, Choy, C., O'Sullivan, K., Tottenham, N. (*submitted*). An Exploration of the Neural Bases of Intergenerational Transmission of Learned Fear.

Korom, M., Callaghan, B., **VanTieghem, M.**, Silvers, J., Choy, T., Kalter, J., Blumenthal, E. & Tottenham, N. (*in prep*). The power of self-generated emotions: effects of educators' instructions and dyadic interactions on children's experiences at the Metropolitan Museum of Art.

Callaghan, B., Gasser C, Silvers, S., **VanTieghem, M.**, Choy, T., Tompary, A., Davachi, L., Tottenham, N. (*submitted*). Age-related increases in posterior hippocampal granularity are associated with remote detailed episodic memory.

Invited Talks & Conference Presentations

VanTieghem, M., Korom, M., Flannery, J., Varman, L., Choy, T., Caldera, C., Gabard-Durnam, L., Goff, B., Gee, D., Humphreys, K., Telzer, E., Shapiro, M., Louie, J. Y., Fareri, D., Bolger, N., Tottenham, N. *Developmental changes in stress physiology and neurobiology following early caregiving adversity*. Talk presented at International Society for Developmental Psychobiology (November 2018) and Society for Research in Child Development (March 2019).

VanTieghem, M., Fields, A., Choy, T., Callaghan, B., Silvers, J., Wilbrecht, L., Tottenham, N. (May 2018). *Effects of early caregiving adversity on reversal learning during adolescence*. Berkeley Adolescent Network, Berkeley, CA.

VanTieghem, M. (April, 2018). *Factors of risk and resilience following early caregiving adversities*. Talk presented at the Emeritus Professors in Columbia talk series, Columbia University, New York, NY.

VanTieghem, M., Telzer, E., Gabard-Durnam, L., Flannery, J., Goff, B., Gee, D.G., Humphreys, K.L., Caldera, C., Shapiro, M., Louie, J., Tottenham, N. (April, 2017). *Neurobiological and Hormonal Predictors of Internalizing Psychopathology Following Early Institutional Caregiving*. Talk presented in paper symposium at the Society for Research on Child Development Biennial meeting, Austin, TX.

Posters

VanTieghem, M., Bloom, P., Heleniak, C., Fields A.F., Harmon, C., Choy, T., Camacho, N., Gibson, L., Shohamy, D., Tottenham, N. (October 2019). *Early caregiving adversity influences effort-based persistence behavior during childhood*. Poster presented at ISDP, Chicago.

VanTieghem, M., Bloom, P., Heleniak, C., Fields A.F., Harmon, C., Choy, T., Camacho, N., Gibson, L., Shohamy, D., Tottenham, N. (September 2019). *Preregistration: Neural and behavioral mechanisms of persistence to setbacks during childhood*. Poster presented at Flux Congress, New York, NY.

VanTieghem, M., Korom, M., Flannery, J., Varman, L., Choy, T., Caldera, C., Gabard-Durnam, L., Goff, B., Gee, D., Humphreys, K., Telzer, E., Shapiro, M., Louie, J. Y., Fareri, D., Bolger, N., Tottenham, N. *Developmental trajectories of stress physiology and neurobiology following early caregiving adversity*. Poster presented at Flux Congress, Berlin Germany (August 2018).

- VanTieghem, M.,** Fields, A., Choy, T., Callaghan, B., Silvers, J, Wilbrecht, L., Tottenham, N. Developmental changes in four-choice reversal learning coincide with pubertal onset. Poster presentation at Flux Congress, Portland OR (September 2017) and ISDP, Washington, DC (November 2017).
- VanTieghem, M.,** Gabard-Durnam, L., Flannery, J., Goff, B., Gee D.G., Humphreys, K., Telzer, E., Caldera, C., Louie, J., and Tottenham, N. The effects of early adversity on amygdala discrimination of positive and negative emotional stimuli during childhood and adolescence. Poster presented at Social Affective Neuroscience Society, New York, NY (April 2016) and Flux Congress, St. Louis MO (September 2016).
- VanTieghem, M.,** Gabard-Durnam, L., Flannery, J., Goff, B., Gee D.G., Humphreys, K., Telzer, E., Caldera, C., Hare, T., and Tottenham, N. Effect of early adversity on emotional appraisals: Implications for amygdala-prefrontal circuit development. Poster presented at Association for Psychological Science, New York, NY (May 2015), and Society for Neuroscience, Chicago, IL (October 2015) and Social Affective Neuroscience Society, Boston, MA (April 2015).
- VanTieghem, M.,** Gabard-Durnam, L., Flannery, J., Goff, B., Gee D.G., Humphreys, K., Telzer, E., Caldera, C., Hare, T., and Tottenham, N. (November 2014). Early life stress induced bias towards positivity: Implications for amygdala-prefrontal circuit development. Poster presented at NYAS Fifth Annual Aspen Brain Forum: Shaping the Developing Brain, NY, NY.
- VanTieghem, M.,** Meffert, H., Blair, R.J. (May, 2014). The Effects of Reward on Stimulus Processing. Poster presentation at the NIH Post-baccalaureate Poster Day, Bethesda MD and the Society for Affective Science Inaugural Meeting, Bethesda MD.
- VanTieghem, M.,** White, S.F., Meffert, H., Blair, R. J. (May, 2013). Punishing unfairness: Rewarding or the organization of a reactively aggressive response? Poster presentation at the Meeting for the Association for Psychological Science, Washington, DC and the NIH Post-Baccalaureate Poster Day Bethesda MD.
- VanTieghem, M.,** Hopkins, M., Davis, C.F., Bucci, D., Whalen, P.J. (May, 2011). Assessing the effect of acute exercise on cognitive performance and emotional well-being as a function of BDNF genotype. Department of Psychological and Brain Sciences Undergraduate Thesis Presentation, Dartmouth College, NH.
- VanTieghem, M.,** Potler, N., Mennes, M., Kelly, C., Di Martino, A., Castellanos, F.X., Milham, M. (August, 2010). Relationship between functional connectivity and inhibitory control: a resting-state fMRI study. Poster presentation at the NYU Summer Undergraduate Research Program symposium, NY, NY and Oral presentation at the Leadership Alliance National Symposium, East Brunswick, NJ.

Teaching Experience

Guest Lectures

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| 2016 | <i>The Developmental Origins of Health and Disease</i> , Health Neuroscience & Stress |
| 2015 | <i>Emotional Development and Temperament</i> , Developmental Psychology |
| 2015 | <i>Early Life Stress and Social Development</i> , Social Development |

Methods Workshops

- 2018 - 2019 Co-Instructor, *Introduction to R for Psychologists* (2-day intensive workshop)
Columbia Psychology Graduate Program
- 2017, 2018 Co-Instructor, *FSL neuroimaging workshop* (6-week tutorial)
Tottenham Lab, Columbia University
- 2016, 2017 Instructor, *Introduction to R* (6-week tutorial)
Tottenham Lab, Columbia University

Teaching Assistantships

- 2019 *Experimental Psychology: Human Behavior*, Professor Patricia Lindemann
- 2018, 2019 *Introduction to R programming*, Professor Jared Lander, CU Business School
- 2018 *Mind Brain and Behavior*, Professor Mariam Aly
- 2017 *Statistics for the Behavioral Scientist*, Professor Greg Jensen
- 2016 *Social Development*, Professor James Curley
- 2015 *Developmental Psychology*, Professor Nim Tottenham

Professional Affiliations

Society for Research in Child Development, Flux Society, International Society for Psychobiology, Association for Psychological Science, Society for Neuroscience

Ad Hoc Reviewer

Biological Psychiatry, Journal of Early Adolescence

Mentoring

Teacher's College Applied Statistics Master's Thesis: Ian Douglas
Teacher's College Clinical Psychology Master's Theses: Marta Korom, Hansee Karamchandani
Columbia Undergraduate Independent Research Project: Jasmin Feliciano
Research Assistants: Jessica Idumonyi, Ian Douglass, Liliana Varman, Lynne Krohn, Andrea Fields

Service & Outreach

- 2018-2019 Co-organizer of R Club, Columbia Psychology Department
- 2016-2017 Student Coordinator for Psychology Graduate Recruitment Day
- 2014-2017 Psychology Department Co-Representative, Women in Science at Columbia
- 2014-2017 Undergraduate Mentoring Co-Chair, Women in Science at Columbia
- 2014 Project leader, Girls Science Day, Women in Science at Columbia