



ET/D Declaration of Authorship

Kelsey Caroline Cleland North

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Declaration for Entire ET/D

In accordance with the University of Tennessee Health Science Center [Honor Code](#) and the requirements for integrity and honesty laid out in the College of Graduate Health Sciences' [Electronic Thesis & Dissertation \(ET/D\) Learning Portal](#), I (Kelsey Caroline Cleland North), declare that this dissertation titled "Modulation of Cerebral Artery Smooth Muscle BK Channel Function by Neurosteroids" and the work presented therein is my own. I confirm that:

- This work was done wholly or mainly while being a candidate for a terminal degree at the University of Tennessee Health Science Center.
- There is clear and full disclosure in the dissertation for any part that was previously submitted for a degree or any other qualification at this University or any other institution or that has been accepted for publication.
- Where I used the published or unpublished work of others, this is clearly attributed.
- Where I have quoted or paraphrased text or have reprinted or modified images, tables, or other data from the work of others, the source is always given, and quotation marks are used for text, following fair use guidelines. Except for such acknowledged instances, this thesis/dissertation is entirely my own work.
- I have acknowledged all other main sources of help (e.g., lab assistance, joint work on projects, consultations/discussions with colleagues/experts, funding).
- Where the thesis/dissertation is based on work done jointly with others, I have made clear what I contributed (see next page).

Alex M. Dopico

Advisor Name

Dopico, Alejandro M
to Kelsey, me, Larry ▾ 8:46 PM

CONFIRMED
Alex Dopico

Digital reply with confirmation

Declaration for Previously Published Articles with Several Authors Incorporated into the ET/D. (Includes in press and accepted articles.)

If this declaration is not applicable, please indicate here:

Articles with several authors incorporated into my ET/D and my contributions to them:

Appendix: A; reference in Chapter 2

Citation: Kelsey C. North, Anna N. Bukiya, and Alex M. Dopico (July 1, 2021). “BK channel-forming slo1 proteins mediate the brain artery constriction evoked by the neurosteroid pregnenolone”. In: *Neuropharmacology* 192, p. 108603. ISSN: 1873-7064. DOI: [10.1016/j.neuropharm.2021.108603](https://doi.org/10.1016/j.neuropharm.2021.108603)

My significant contributions: designed research, performed research, analyzed data, and wrote the paper.

Appendix: B; reference in Chapter 3

Citation: The pre-published article was used with the permission of all corresponding authors. **Site and mechanism of action of for pregnenolone-induced inhibition of BK channels and eventual cerebral artery constriction.** Authors: Kelsey C. North, Andrew Shaw, Gregg E. Homanics, Anna N. Bukiya, and Alex M. Dopico

My significant contributions: designed research, performed research, analyzed data, and wrote the paper.

Appendix: C; referenced in Chapter 4

Citation: Kelsey C. North, Man Zhang, et al. (Mar. 2022). “Cholesterol Inhibition of Slo1 Channels Is Calcium-Dependent and Can Be Mediated by Either High-Affinity Calcium-Sensing Site in the Slo1 Cytosolic Tail”. In: *Molecular Pharmacology* 101.3, pp. 132–143. ISSN: 1521-0111. DOI: [10.1124/molpharm.121.000392](https://doi.org/10.1124/molpharm.121.000392)

My significant contributions: designed research, performed research, analyzed data, and wrote the paper.

Appendix: D; referenced in Chapter 6

Citation: Kelsey North et al. (Nov. 2020). “Celastrol Dilates and Counteracts Ethanol-Induced Constriction of Cerebral Arteries”. In: *The Journal of Pharmacology and Experimental Therapeutics* 375.2, pp. 247–257. ISSN: 1521-0103. DOI: [10.1124/jpet.120.000152](https://doi.org/10.1124/jpet.120.000152)

My significant contributions: designed research, performed research, analyzed data, and wrote the paper.

Appendix: E; referenced in Chapter 7

Citation: The pre-published article was used with the permission of all corresponding authors. **Progesterone activation of β 1-containing BK channels involves two novel binding sites.** Authors: Kelsey C. North, Andrew Shaw, Anna N. Bukiya, and Alex M. Dopico

My significant contributions: designed research, performed research, analyzed data, and wrote the paper.