

University of Kentucky UKnowledge

Ophthalmology and Visual Science Faculty Publications

Ophthalmology and Visual Science

1-10-2022

# Reply to: "Microvascular Breakdown Due to Retinal Neurodegeneration in Ataxias"

Christopher A. Turski University of Kentucky, Christopher.Turski@uky.edu

Gabrielle N. Turski German Center for Neurodegenerative Diseases, Germany

Jennifer Faber German Center for Neurodegenerative Diseases, Germany

Stefan J. Teipel University of Rostock, Germany

Frank G. Holz University of Bonn, Germany

See next page for additional authors

Follow this and additional works at: https://uknowledge.uky.edu/ophthalmology\_facpub

Part of the Ophthalmology Commons

Right click to open a feedback form in a new tab to let us know how this document benefits you.

# **Repository Citation**

Turski, Christopher A.; Turski, Gabrielle N.; Faber, Jennifer; Teipel, Stefan J.; Holz, Frank G.; Klockgether, Thomas; and Finger, Robert P., "Reply to: "Microvascular Breakdown Due to Retinal Neurodegeneration in Ataxias"" (2022). *Ophthalmology and Visual Science Faculty Publications*. 23. https://uknowledge.uky.edu/ophthalmology\_facpub/23

This Response or Comment is brought to you for free and open access by the Ophthalmology and Visual Science at UKnowledge. It has been accepted for inclusion in Ophthalmology and Visual Science Faculty Publications by an authorized administrator of UKnowledge. For more information, please contact UKnowledge@lsv.uky.edu.

# Reply to: "Microvascular Breakdown Due to Retinal Neurodegeneration in Ataxias"

Digital Object Identifier (DOI) https://doi.org/10.1002/mds.28916

## **Notes/Citation Information**

Published in Movement Disorders.

#### © 2022 The Authors

This is an open access article under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

### Authors

Christopher A. Turski, Gabrielle N. Turski, Jennifer Faber, Stefan J. Teipel, Frank G. Holz, Thomas Klockgether, and Robert P. Finger

#### Check for updates

# REPLY

# Reply to: "Microvascular Breakdown Due to Retinal Neurodegeneration in Ataxias"

Christopher A. Turski, MD,<sup>1,2\*</sup> Gabrielle N. Turski, MD,<sup>2,3</sup> Jennifer Faber, MD,<sup>2,4</sup> Stefan J. Teipel, MD,<sup>5,6</sup> Frank G. Holz, MD,<sup>7</sup> Thomas Klockgether, MD,<sup>2,4</sup> and Robert P. Finger, MD<sup>7</sup>

<sup>1</sup>Department of Ophthalmology, University of Kentucky, Lexington, KY, USA
 <sup>2</sup>German Center for Neurodegenerative Diseases (DZNE), Bonn, Germany
 <sup>3</sup>Department of Ophthalmology, Duke University, Durham, NC, USA
 <sup>4</sup>Department of Neurology, University of Bonn, Bonn, Germany
 <sup>5</sup>Department of Psychosomatic Medicine, University of Rostock, Rostock, Germany
 <sup>6</sup>German Center for Neurodegenerative Diseases (DZNE), Rostock, Germany
 <sup>7</sup>Department of Ophthalmology, University of Bonn, Bonn, Germany

We thank Dr. Tensini and colleagues<sup>1</sup> for their interest in and appreciation of our study describing concurrent retinal microvascular and structural changes in degenerative ataxias shown by optical coherence tomography (OCT) angiography (OCT-A) and OCT.<sup>2</sup>

In the previous study, Tensini et al.<sup>3</sup> compared disease-specific effects on retinal morphology in spinocerebellar ataxia types 3 and 10 using OCT. In our study, we used OCT in parallel with OCT-A to assess alterations of retinal microvasculature and morphology simultaneously. We studied a mixed population of patients with spinocerebellar ataxia types 1, 2, 3, and 6, with Friedreich's ataxia, and with multiple system atrophy of cerebellar type. Our study showed changes in retinal vessel density in the superficial vascular complex primarily involving the radial peripapillary capillary network, the capillary density inside the optic nerve head, and the nasal region of the macular superficial vascular plexus in most patients with ataxia across all studied diseases.<sup>2</sup> The limited size of each disease group did not allow for the detailed assessment of

© 2022 The Authors. *Movement Disorders* published by Wiley Periodicals LLC on behalf of International Parkinson and Movement Disorder Society

This is an open access article under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

\*Correspondence to: Dr. Christopher A. Turski, Department of Ophthalmology, University of Kentucky, 110 Conn Terrace, Suite 550, Lexington, KY 40508, USA; E-mail: christopher.turski@uky.edu

Relevant conflicts of interest/financial disclosures: Nothing to report.

Author roles may be found in the online version of this article.

Received: 19 December 2021; Accepted: 21 December 2021

Published online in Wiley Online Library (wileyonlinelibrary.com). DOI: 10.1002/mds.28916 disease-specific alterations. Nevertheless, we fully agree with Dr. Tensini and coworkers<sup>1</sup> that disease-specific changes might be expected for retinal microvasculature, because they have been found for retinal morphology. In our ongoing studies, we are attempting to define such specific microvascular abnormalities in single genetically determined ataxia entities.

We would like to thank Dr. Tensini and colleagues<sup>1</sup> for their greatly considered comments and would like to emphasize the view that adding retinal phenotyping could potentially open a new field of research toward exploring degenerative ataxias from a different perspective.

#### **Data Availability Statement**

The data that support the findings of this study are available from the corresponding author upon reasonable institutional request.

### References

- 1. Tensini FS, Coutinho L, Ghizoni Teive HA. Reply to: microvascular breakdown due to retinal neurodegeneration in ataxias. Mov Disord 2021;
- Turski CA, Turski GN, Faber J, et al. Microvascular breakdown due to retinal neurodegeneration in ataxias. Mov Disord 2021. https:// doi.org/10.1002/mds.28791
- Tensini FS, Sato MT, Shiokawa N, Ashizawa T, Teive HAG. A comparative optical coherence tomography study of spinocerebellar ataxia types 3 and 10. Cerebellum 2017;16:797–801.

# SGML and CITI Use Only DO NOT PRINT

# Author Roles

(1) Research Project: A. Conception, B. Organization, C. Execution;
(2) Manuscript: A. Writing of the First Draft, B. Review and Critique.
C.A.T.: 1A, 1B, 1C, 2A
G.N.T.: 1A, 1B, 1C, 2A
J.F.: 2B
S.J.T.: 2B
F.G.H.: 2B
T.K.: 1A, 2B
R.P.F.: 2B