## SPECIAL TOPIC: Diabetic retinopathy special edition

ISSN: 1674-7305 (Print) 1869-1889 (Online)

1. Editorial

### [Understanding diabetic retinopathy](https://urldefense.proofpoint.com/v2/url?u=https-3A__link.springer.com_article_10.1007_s11427-2D015-2D4890-2D8&d=DwMFbw&c=ZQs-KZ8oxEw0p81sqgiaRA&r=rOMURTZ4fslq9dKzVxltN4xNU-D2Ru1wiL30akyNmwk&m=ZiZakoh0IT27hRkCYM5iS5JmOlSsRGl19ZBVK5zO6eg&s=UTSPHwVoC3m8tXXDLS1wqkS2ini1I8_IwVLGIs6flbE&e=)

[MingLiang Pu](https://urldefense.proofpoint.com/v2/url?u=https-3A__link.springer.com_search-3Ffacet-2Dcreator-3D-2522MingLiang-2BPu-2522&d=DwMFbw&c=ZQs-KZ8oxEw0p81sqgiaRA&r=rOMURTZ4fslq9dKzVxltN4xNU-D2Ru1wiL30akyNmwk&m=ZiZakoh0IT27hRkCYM5iS5JmOlSsRGl19ZBVK5zO6eg&s=0FV6RIopmt4UrSmNGRaOy0RAzS3_mJ3T3Krir7HBkRs&e=) Pages 519-520

[**Download PDF**(298KB)](https://urldefense.proofpoint.com/v2/url?u=https-3A__link.springer.com_content_pdf_10.1007-252Fs11427-2D015-2D4890-2D8.pdf&d=DwMFbw&c=ZQs-KZ8oxEw0p81sqgiaRA&r=rOMURTZ4fslq9dKzVxltN4xNU-D2Ru1wiL30akyNmwk&m=ZiZakoh0IT27hRkCYM5iS5JmOlSsRGl19ZBVK5zO6eg&s=QBlqo7Cf5nlBGY2pgK5CXHh_WPOlh8c9b9F_DJ3hU-E&e=)

1. Research Paper

### [Epac2-deficiency leads to more severe retinal swelling, glial reactivity and oxidative stress in transient middle cerebral artery occlusion induced ischemic retinopathy](https://urldefense.proofpoint.com/v2/url?u=https-3A__link.springer.com_article_10.1007_s11427-2D015-2D4860-2D1&d=DwMFbw&c=ZQs-KZ8oxEw0p81sqgiaRA&r=rOMURTZ4fslq9dKzVxltN4xNU-D2Ru1wiL30akyNmwk&m=ZiZakoh0IT27hRkCYM5iS5JmOlSsRGl19ZBVK5zO6eg&s=ZTJLg4QrmzXcO81Oh6bG5PWr1QtNMDhcQYYU5X1_lkA&e=)

[Jin Liu](https://urldefense.proofpoint.com/v2/url?u=https-3A__link.springer.com_search-3Ffacet-2Dcreator-3D-2522Jin-2BLiu-2522&d=DwMFbw&c=ZQs-KZ8oxEw0p81sqgiaRA&r=rOMURTZ4fslq9dKzVxltN4xNU-D2Ru1wiL30akyNmwk&m=ZiZakoh0IT27hRkCYM5iS5JmOlSsRGl19ZBVK5zO6eg&s=QACVlzjBBxqqz-hHdy6Y5ufRnsl4L7Cfqzllw2smqSg&e=), [Patrick Ka Kit Yeung](https://urldefense.proofpoint.com/v2/url?u=https-3A__link.springer.com_search-3Ffacet-2Dcreator-3D-2522Patrick-2BKa-2BKit-2BYeung-2522&d=DwMFbw&c=ZQs-KZ8oxEw0p81sqgiaRA&r=rOMURTZ4fslq9dKzVxltN4xNU-D2Ru1wiL30akyNmwk&m=ZiZakoh0IT27hRkCYM5iS5JmOlSsRGl19ZBVK5zO6eg&s=WWcA17PEo_oXatSUd2pROvqcGxvZZfpfcS-37quyV94&e=), [Lu Cheng](https://urldefense.proofpoint.com/v2/url?u=https-3A__link.springer.com_search-3Ffacet-2Dcreator-3D-2522Lu-2BCheng-2522&d=DwMFbw&c=ZQs-KZ8oxEw0p81sqgiaRA&r=rOMURTZ4fslq9dKzVxltN4xNU-D2Ru1wiL30akyNmwk&m=ZiZakoh0IT27hRkCYM5iS5JmOlSsRGl19ZBVK5zO6eg&s=Lev9vfDIWBAfJk2mKiRgueXaZqvfVCQxRGbeFH9AY8Q&e=), [Amy Cheuk Yin Lo](https://urldefense.proofpoint.com/v2/url?u=https-3A__link.springer.com_search-3Ffacet-2Dcreator-3D-2522Amy-2BCheuk-2BYin-2BLo-2522&d=DwMFbw&c=ZQs-KZ8oxEw0p81sqgiaRA&r=rOMURTZ4fslq9dKzVxltN4xNU-D2Ru1wiL30akyNmwk&m=ZiZakoh0IT27hRkCYM5iS5JmOlSsRGl19ZBVK5zO6eg&s=GjBHkzKkjDGO0sUt6KZ_5qgUfATZizkmR3fKDQkNM7w&e=)…Pages 521-530

[**Download PDF**(2302KB)](https://urldefense.proofpoint.com/v2/url?u=https-3A__link.springer.com_content_pdf_10.1007-252Fs11427-2D015-2D4860-2D1.pdf&d=DwMFbw&c=ZQs-KZ8oxEw0p81sqgiaRA&r=rOMURTZ4fslq9dKzVxltN4xNU-D2Ru1wiL30akyNmwk&m=ZiZakoh0IT27hRkCYM5iS5JmOlSsRGl19ZBVK5zO6eg&s=vtq8Emz5BZjJkEpNLKERmG9CYeAqAej3Wd72RE0P0kA&e=)

1. Research Paper

### [Apelin activates the expression of inflammatory cytokines in microglial BV2 cells via PI-3K/Akt and MEK/Erk pathways](https://urldefense.proofpoint.com/v2/url?u=https-3A__link.springer.com_article_10.1007_s11427-2D015-2D4861-2D0&d=DwMFbw&c=ZQs-KZ8oxEw0p81sqgiaRA&r=rOMURTZ4fslq9dKzVxltN4xNU-D2Ru1wiL30akyNmwk&m=ZiZakoh0IT27hRkCYM5iS5JmOlSsRGl19ZBVK5zO6eg&s=dyx6L9pJ0klBz_RfU3jqyAIDcasyzwQmdW8Z5eRLUXQ&e=)

[Li Chen](https://urldefense.proofpoint.com/v2/url?u=https-3A__link.springer.com_search-3Ffacet-2Dcreator-3D-2522Li-2BChen-2522&d=DwMFbw&c=ZQs-KZ8oxEw0p81sqgiaRA&r=rOMURTZ4fslq9dKzVxltN4xNU-D2Ru1wiL30akyNmwk&m=ZiZakoh0IT27hRkCYM5iS5JmOlSsRGl19ZBVK5zO6eg&s=w15gkJGTUqM7MkOSI9y2FxM3SHlaP68rJCOvXEV-qD8&e=), [Yong Tao](https://urldefense.proofpoint.com/v2/url?u=https-3A__link.springer.com_search-3Ffacet-2Dcreator-3D-2522Yong-2BTao-2522&d=DwMFbw&c=ZQs-KZ8oxEw0p81sqgiaRA&r=rOMURTZ4fslq9dKzVxltN4xNU-D2Ru1wiL30akyNmwk&m=ZiZakoh0IT27hRkCYM5iS5JmOlSsRGl19ZBVK5zO6eg&s=jts4d33jrXTaJKlIDqaaDi1cu-Uf-00FyR17Qt1D19U&e=), [YanRong Jiang](https://urldefense.proofpoint.com/v2/url?u=https-3A__link.springer.com_search-3Ffacet-2Dcreator-3D-2522YanRong-2BJiang-2522&d=DwMFbw&c=ZQs-KZ8oxEw0p81sqgiaRA&r=rOMURTZ4fslq9dKzVxltN4xNU-D2Ru1wiL30akyNmwk&m=ZiZakoh0IT27hRkCYM5iS5JmOlSsRGl19ZBVK5zO6eg&s=TUBngZ6UBgI8e4D9FVdldR1fcg5eKU3jcyb-DZIzxP4&e=) Pages 531-540

[**Download PDF**(2109KB)](https://urldefense.proofpoint.com/v2/url?u=https-3A__link.springer.com_content_pdf_10.1007-252Fs11427-2D015-2D4861-2D0.pdf&d=DwMFbw&c=ZQs-KZ8oxEw0p81sqgiaRA&r=rOMURTZ4fslq9dKzVxltN4xNU-D2Ru1wiL30akyNmwk&m=ZiZakoh0IT27hRkCYM5iS5JmOlSsRGl19ZBVK5zO6eg&s=RW2HhahVDbF0v9VhdpWNqQCkESZRWCAG-PJgksxhAFk&e=)

1. Review

### [Diabetic retinopathy: recent advances towards understanding neurodegeneration and vision loss](https://urldefense.proofpoint.com/v2/url?u=https-3A__link.springer.com_article_10.1007_s11427-2D015-2D4856-2Dx&d=DwMFbw&c=ZQs-KZ8oxEw0p81sqgiaRA&r=rOMURTZ4fslq9dKzVxltN4xNU-D2Ru1wiL30akyNmwk&m=ZiZakoh0IT27hRkCYM5iS5JmOlSsRGl19ZBVK5zO6eg&s=6kuGjvpkvWINVIZId3KILNmHQyq4URT6b-eAVCle0ME&e=)

[Alistair J. Barber](https://urldefense.proofpoint.com/v2/url?u=https-3A__link.springer.com_search-3Ffacet-2Dcreator-3D-2522Alistair-2BJ.-2BBarber-2522&d=DwMFbw&c=ZQs-KZ8oxEw0p81sqgiaRA&r=rOMURTZ4fslq9dKzVxltN4xNU-D2Ru1wiL30akyNmwk&m=ZiZakoh0IT27hRkCYM5iS5JmOlSsRGl19ZBVK5zO6eg&s=UJIzWrWEzD4aTcodqkLJTBR6WWtWzZCr-4f8n5aH4Is&e=) Pages 541-549

[**Download PDF**(442KB)](https://urldefense.proofpoint.com/v2/url?u=https-3A__link.springer.com_content_pdf_10.1007-252Fs11427-2D015-2D4856-2Dx.pdf&d=DwMFbw&c=ZQs-KZ8oxEw0p81sqgiaRA&r=rOMURTZ4fslq9dKzVxltN4xNU-D2Ru1wiL30akyNmwk&m=ZiZakoh0IT27hRkCYM5iS5JmOlSsRGl19ZBVK5zO6eg&s=PR5nhvbhAygM13sbBAhd4MrPP0597vv04YKU_Iux1j8&e=)

1. Research Paper

### [Association between retinal neuronal degeneration and visual function impairment in type 2 diabetic patients without diabetic retinopathy](https://urldefense.proofpoint.com/v2/url?u=https-3A__link.springer.com_article_10.1007_s11427-2D015-2D4858-2D8&d=DwMFbw&c=ZQs-KZ8oxEw0p81sqgiaRA&r=rOMURTZ4fslq9dKzVxltN4xNU-D2Ru1wiL30akyNmwk&m=ZiZakoh0IT27hRkCYM5iS5JmOlSsRGl19ZBVK5zO6eg&s=S2poMAw0YEddW2O_skJX8z48jKcNSkTnLxVWNNNvgRY&e=)

[TiePei Zhu](https://urldefense.proofpoint.com/v2/url?u=https-3A__link.springer.com_search-3Ffacet-2Dcreator-3D-2522TiePei-2BZhu-2522&d=DwMFbw&c=ZQs-KZ8oxEw0p81sqgiaRA&r=rOMURTZ4fslq9dKzVxltN4xNU-D2Ru1wiL30akyNmwk&m=ZiZakoh0IT27hRkCYM5iS5JmOlSsRGl19ZBVK5zO6eg&s=m_DlvTFi0UJ8eyiiqTpQkUx88H2KsgeDdjSDoZk_TSA&e=), [Jin Ma](https://urldefense.proofpoint.com/v2/url?u=https-3A__link.springer.com_search-3Ffacet-2Dcreator-3D-2522Jin-2BMa-2522&d=DwMFbw&c=ZQs-KZ8oxEw0p81sqgiaRA&r=rOMURTZ4fslq9dKzVxltN4xNU-D2Ru1wiL30akyNmwk&m=ZiZakoh0IT27hRkCYM5iS5JmOlSsRGl19ZBVK5zO6eg&s=MIOTR1jyW7enK4m-V38VDi9yyItB9CnQWT3cxfpx_Hw&e=), [YongHao Li](https://urldefense.proofpoint.com/v2/url?u=https-3A__link.springer.com_search-3Ffacet-2Dcreator-3D-2522YongHao-2BLi-2522&d=DwMFbw&c=ZQs-KZ8oxEw0p81sqgiaRA&r=rOMURTZ4fslq9dKzVxltN4xNU-D2Ru1wiL30akyNmwk&m=ZiZakoh0IT27hRkCYM5iS5JmOlSsRGl19ZBVK5zO6eg&s=ecgdQsTAkZm9zfnPZ_h2bBRZfS9c4faOa5E7341W1B8&e=), [Zheng Zhang](https://urldefense.proofpoint.com/v2/url?u=https-3A__link.springer.com_search-3Ffacet-2Dcreator-3D-2522Zheng-2BZhang-2522&d=DwMFbw&c=ZQs-KZ8oxEw0p81sqgiaRA&r=rOMURTZ4fslq9dKzVxltN4xNU-D2Ru1wiL30akyNmwk&m=ZiZakoh0IT27hRkCYM5iS5JmOlSsRGl19ZBVK5zO6eg&s=dHFMgwIb-M983v4c13B-JWgKANQudCMwjMDUS3ymxbU&e=) Pages 550-555

[**Download PDF**(379KB)](https://urldefense.proofpoint.com/v2/url?u=https-3A__link.springer.com_content_pdf_10.1007-252Fs11427-2D015-2D4858-2D8.pdf&d=DwMFbw&c=ZQs-KZ8oxEw0p81sqgiaRA&r=rOMURTZ4fslq9dKzVxltN4xNU-D2Ru1wiL30akyNmwk&m=ZiZakoh0IT27hRkCYM5iS5JmOlSsRGl19ZBVK5zO6eg&s=CNQb_vlnVeMrIiPsZCfSCG4dHau-H6FFCdi4EsSEswA&e=)

1. Review

### [Contribution of epigenetics in diabetic retinopathy](https://urldefense.proofpoint.com/v2/url?u=https-3A__link.springer.com_article_10.1007_s11427-2D015-2D4853-2D0&d=DwMFbw&c=ZQs-KZ8oxEw0p81sqgiaRA&r=rOMURTZ4fslq9dKzVxltN4xNU-D2Ru1wiL30akyNmwk&m=ZiZakoh0IT27hRkCYM5iS5JmOlSsRGl19ZBVK5zO6eg&s=8DR70WAaL1BYax4T5OdvTsOdZRp56vy5Jea9y9bJGjc&e=)

[Renu A. Kowluru](https://urldefense.proofpoint.com/v2/url?u=https-3A__link.springer.com_search-3Ffacet-2Dcreator-3D-2522Renu-2BA.-2BKowluru-2522&d=DwMFbw&c=ZQs-KZ8oxEw0p81sqgiaRA&r=rOMURTZ4fslq9dKzVxltN4xNU-D2Ru1wiL30akyNmwk&m=ZiZakoh0IT27hRkCYM5iS5JmOlSsRGl19ZBVK5zO6eg&s=0Rv72IGcuMSRLHAtLmlSRcNcx7dBPOQQ7pczOp6VdFg&e=), [Manish Mishra](https://urldefense.proofpoint.com/v2/url?u=https-3A__link.springer.com_search-3Ffacet-2Dcreator-3D-2522Manish-2BMishra-2522&d=DwMFbw&c=ZQs-KZ8oxEw0p81sqgiaRA&r=rOMURTZ4fslq9dKzVxltN4xNU-D2Ru1wiL30akyNmwk&m=ZiZakoh0IT27hRkCYM5iS5JmOlSsRGl19ZBVK5zO6eg&s=oJY6eIKJafXxbGY1rlXMMt6wNr7puifnXSfUG6wz5C0&e=) Pages 556-563

[**Download PDF**(411KB)](https://urldefense.proofpoint.com/v2/url?u=https-3A__link.springer.com_content_pdf_10.1007-252Fs11427-2D015-2D4853-2D0.pdf&d=DwMFbw&c=ZQs-KZ8oxEw0p81sqgiaRA&r=rOMURTZ4fslq9dKzVxltN4xNU-D2Ru1wiL30akyNmwk&m=ZiZakoh0IT27hRkCYM5iS5JmOlSsRGl19ZBVK5zO6eg&s=oSrJ62JA9yYCT79fYg47Fgyb6InndVpx5RzCTXJhOY4&e=)