**ABSTRACT FORM SIREV 2025**

**Contact data:**

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| **Corresponding author:** | **e-mail address:** | **telephone number:** |
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**Title**

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**Purpose:**

**Methods:**

**Results:**

**Conclusion:**

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**ABSTRACT FORM SIREV 2025**

**Contact data:**

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| --- | --- | --- |
| **Corresponding author:** | **e-mail address:** | **telephone number:** |
| Michael D. Espitia | Michael.espitia@uah.es | 678872844 |

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**Arrange below your SIREV 2025 abstract:**

**Retinal neurodegeneration. Activity of the visual cortex in a blinded murine model induced by sodium iodate.**

*M.D. Espitia a, S. Milla-Navarro ab,* *P. de la Villa ab, F. Germain ab*

a University of Alcalá, Systems Biology, Alcalá De Henares, Spain; b IRYCIS, Hospital Ramón y Cajal, Madrid, Spain

**Purpose:** Recent studies have shown the capabilities of sodium iodate (NaIO3) as a powerful tool for the development of a new promising animal model of retinal neurodegeneration. This model seems to be useful for the development of pharmacological strategies against degenerative diseases of the visual system. Functional and structural retinal modifications have been tested in this murine model of blindness. **Methods**: NaIO3 has been intraperitoneal injected and its has been addressed. A single dose of NaIO3 (65 mg/kg) was administrated intraperitoneally to mice fo the C57BL/6J strain with a knock-out mutation for the Opn4 gene (Opn4-/-). Then, subjects were evaluated by behavioral and electrophysiological tests. The light/dark transition test was evaluated every two days until day 28th; electroretinogram tests (ERG) and visual evoked potentials (VEP) were recorded weekly until day 42nd. On day 57, histological analysis of the retina was assessed by immunohistochemical methods. **Results:** The results obtained showed a progressive decrease in the light sensitivity tested under behavioral test. The amplitude of the ERG components, as well as a cortical electrical activity were significantly reduced compared with control individuals. Immunohistochemistry showed retinal structural alterations in the photoreceptor’s outer segments of the NaIO3 injected animals. **Conclusions:** The study evidences an alteration of the outer retinal layer as well as a decreased response in the visual cortex under the effect of NaIO3, as expected. This means that NaIO3 is an effective tool for inducing retinal neurodegeneration, offering a new model for the evaluation retinal potential therapeutical strategies.