



*Research article*

**Development and bioevaluation of controlled release 5-aminoisoquinoline nanocomposite: a synergistic anticancer activity against human colon cancer**

**Alaa AL-Rahman Gamal<sup>1</sup>, El-Sayed Mahmoud El-Sayed<sup>1</sup>, Tarek El-Hamoly<sup>2,3,\*</sup> and Heba Kahil<sup>1</sup>**

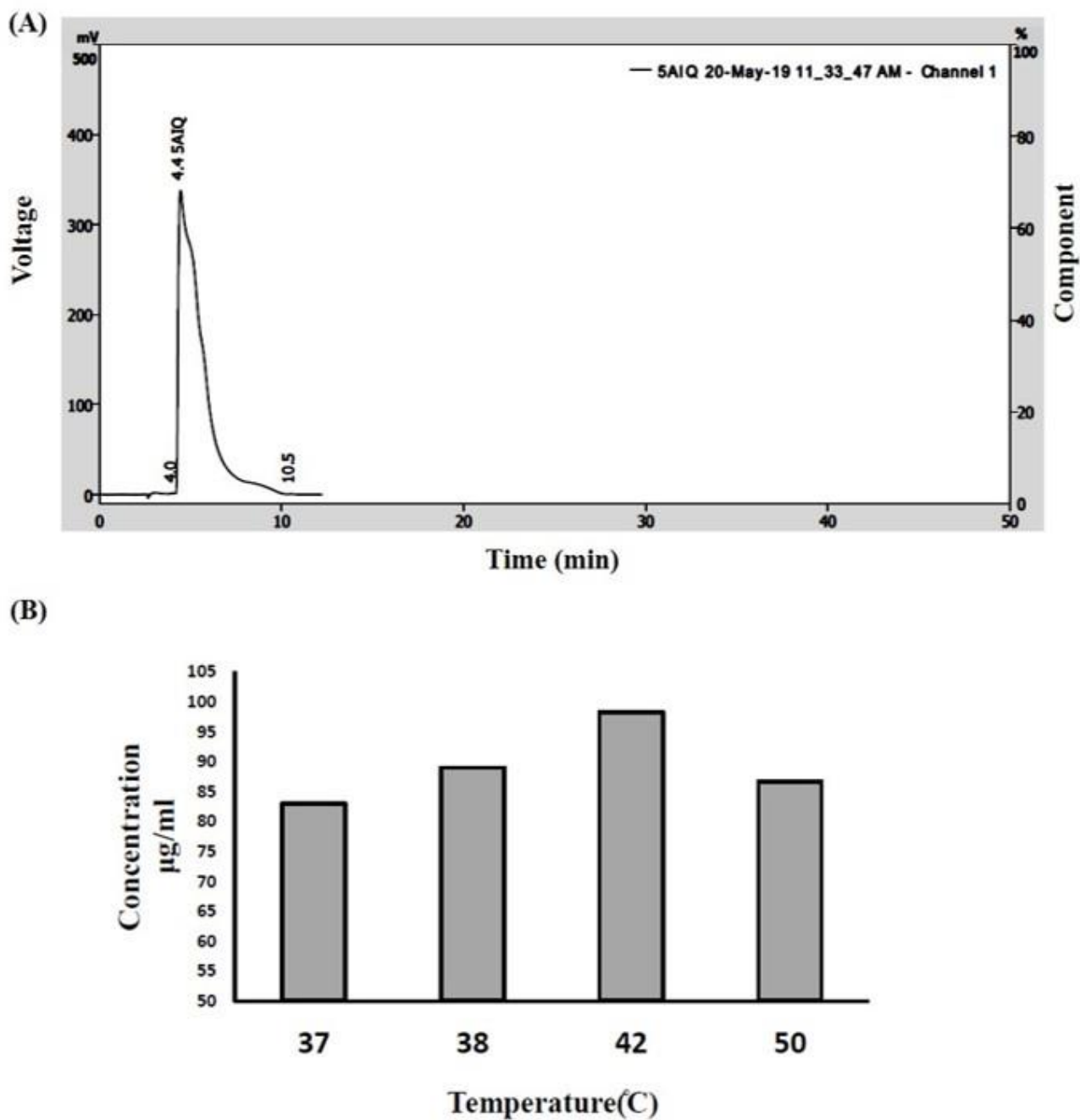
<sup>1</sup> Biophysics group, Physics Department, Faculty of Science, Ain Shams University, Cairo Egypt

<sup>2</sup> Drug Radiation Research Department, National Center for Radiation Research and Technology, Egyptian Atomic Energy Authority, Cairo, Egypt

<sup>3</sup> Cyclotron Project, Nuclear Research Centre, Egyptian Atomic Energy Authority, Cairo, Egypt

\* **Correspondence:** Email: [tahamoly@hotmail.com](mailto:tahamoly@hotmail.com), [tarek-elhamouly@eru.edu.eg](mailto:tarek-elhamouly@eru.edu.eg); Tel: +201201700718.

---



**Figure S1.** (A) HPLC chromatogram of 5-AIQ, (B) 5-AIQ release profile of MTN.5AIQ with the temperature for MTN.5-AIQ. 5-AIQ; 5-aminoisoquinoline.

**Table S1.** Drug loading procedure; the magnetic thermoresponsive nanocomposites (MTN) and the drug (5AIQ) weights and their ratios.

| Sample     | MTN (mg) | 5AIQ (mg) | Volume of drug solution (ml) | MTN to drug ratio wt/wt |
|------------|----------|-----------|------------------------------|-------------------------|
| MTN.5AIQ.1 | 50       | 5         | 4                            | 10:1                    |
| MTN.5AIQ.2 | 50       | 10        | 4                            | 5:1                     |
| MTN.5AIQ.3 | 50       | 20        | 4                            | 2.5:1                   |
| MTN.5AIQ.4 | 50       | 30        | 4                            | 1.67:1                  |



AIMS Press

© 2022 the Author(s), licensee AIMS Press. This is an open access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>)