A New Therapy Without Side Effects Could Improve Dramatically Chemotherapy

This significant progress –based on nanotechnology– has been achieved by researchers of the universities of Granada, Edimbourgh and Kebangsaan (Malaisie). This therapy is based on the encapsulation of a catalyst (palladium) into microspheres, to synthesize artificial materials or activate drugs into human cells, thus avoiding any toxicity.

Researchers of the University of Granada and Edimbourgh have developed a new therapy for cancer based on nanotechnology that might improve significantly chemotherapy, as it has not cause side effects.

This therapy is based on the encapsulation of a catalyst (palladium) into microspheres, to synthesize artificial materials or activate drugs within human cells, thus avoiding any toxicity. This system captures palladium within its microstructure. Palladium is a metal not found naturally in human cells that allows to catalyze chemical reactions within cells without altering its basic functions such as protein synthesis and metabolism. This technique allows to “create” anti-cancer drugs within cells, which could be used for the specific treatment of tumors and would improve dramatically current chemotherapy treatments.

The results of this research –conducted in collaboration with the University of Kebangsaan (Malasia)– were recently published in the prestigious journal Nature Chemistry.

Participation Of The University of Granada

Rosario María Sánchez Martín –the researcher that has developed this technology at the School of Chemistry of the University of Edimbourgh– has recently joined the Department of Pharmaceutical and Organic Chemistry of the University of Granada.

Another of the scientists that forms this research group, Asier Unciti Broceta, did his undergraduate studies and doctorate at the Department of Pharmaceutical and Organic Chemistry at the University of Granada, and he currently continues his successful career in Edinburgh, where he was recently named Fellow of the Edinburgh Cancer Research UK Centre, and received the award of Young Life Scientist of the Year 2010 in Scotland. Additionally, he has founded a new company, Deliverics Ltd, based on one of his patents.

Researchers pointed that, given the wide range of therapeutic applications of nanotechnology, this research will be further developed by University of Granada professor Dr Sanchez Martin, who will continue her collaboration with the research group conducted by professor Mark Bradley of the University of Edimbourgh.

On the Net:

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