

# JOSE IGNACIO GARCÍA ALONSO

*Head of the Enriched Stable Isotopes research group*

*Analytical Chemistry Professor at the University of Oviedo*



## **Academic Studies**

BSc in Chemistry, University of Oviedo (1980)

PhD Analytical Chemistry, University of Oviedo (1985)

## **Professional Experience**

-Postdoctoral researcher, Plymouth University, United Kingdom (1986-1987)

-Scientific Officer of the European Commission, Joint Research Centre, Institute for Transuranium Elements, Karlsruhe, Germany (1990-1995)

-Assistant Professor, University of Oviedo, Spain (1995-2007)

-Full Professor, University of Oviedo (from 2007)

-Head of the Mass Spectrometry Service, University of Oviedo (1996-2014)

-Coordinator of the Doctorate Program, Department of Physical and Analytical Chemistry, University of Oviedo (2011-2015).

## **Contact**

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## **Research topics**

*Research Lines:*

- Speciation Analysis for trace elements in biological, environmental, food and feed samples by ICP-MS.
- Analysis of organic contaminants such as PCBs, PAHs, PBDEs, etc. in environmental samples by GC-MS/MS, GC-ICP-MS, GC-MS and LC-MS/MS.
- Determination of proteins biomarkers in clinical samples by quantitative proteomics using LC- MS/MS
- Isotope ratio measurements for geochemical dating, provenance studies in archaeological materials and for traceability of goods and living organisms by multicollector ICP-MS.
- Traceable characterization of natural peptides and proteins by Isotope Dilution Analysis using Amino Acids Hydrolysis and LC-MS/MS and on-line IDMS-HPLC- IRMS for the purity assessment of analytical standards and peptides.
- Application of enriched stable isotopes in clinical chemistry and metabolic studies .

Mass Spectrometry Experience:

**Mass Spectrometers:** quadrupole (Q), triple quadrupole (QqQ), multicollector (MC), sector field (HR), Time of flight (TOF), double focusing.

**Ionization Sources:** Inductively Coupled Plasma (ICP), Electrospray (ESI), Atmospheric Pressure Chemical Ionization (APCI), Chemical Ionization (CI), Electronic Impact (EI), Matrix Assisted Laser Desorption Ionization (MALDI).

**Sample introduction and/or separation techniques:** Laser Ablation, Liquid and Gas Chromatography.

**Fields:** clinical, biochemical and metabolomics analysis, toxicological analysis, food analysis, archaeometry, geochemistry and environmental analysis.