



Juan Antonio Galbis Pérez

Curriculum Vitae (October 2008)

Affiliation

Full Professor
Chair in Organic Chemistry (expertise field: Carbohydrate Chemistry. Polymer Chemistry)
Department of Organic and Pharmaceutical Chemistry
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Education

- Chemistry Degree, University of Seville, Spain.
- Ph.D. in Organic Chemistry, "Synthesis of Paentahydroxipentyl Pyrroles", University of Seville, Spain. Profs. Francisco García González and José M. Fernández-Bolaños Vázquez.
- Visiting Researcher: Department of Chemistry, The Ohio State University, Columbus (Ohio), USA. Prof. Derek Horton.

Regular teaching activities

- Degree in Pharmacy (University of Seville); Subjects: Organic Chemistry and Pharmaceutical Chemistry.
- Official University Master "Advanced Chemistry" (University of Seville); Subjects: Polymer Chemistry. Biomaterials.

Scientific indicators

- Author of about 120 papers in ISI journals (list available on request).
- Author of a text book on Pharmaceutical Chemistry
- Author of 2 chapters in books.
- Tutor of 19 Ph.D. Thesis, three of them in course.
- Leader of 19 research projects funded by public institutions and industrial companies.

Current scientific activities related to the research topic

- Head of the Department of Organic and Pharmaceutical Chemistry.
- Head of the research group "Carbohydrates and Polymers". Composition: 8 staff people, 1 High level technician, 3 Ph.D. students. Group of Excellence of the Andalucía Government (FQM-135).
- **Synthesis and structural characterization of new carbohydrate-based monomers** (O-protected and unprotected alditols, aldaric and aldonic acids, and aminosugars are synthesized to obtain new polymers with improved physical and chemical properties of interest in the biomedical field).
- **Biodegradable polymers derived from carbohydrates** (carbohydrate derived monomers such as aldaric acids and alditols are used for preparing a variety of biodegradable polycondensates and their biodegradability evaluated as a function of the sugar constitution and configuration).
- **Development of new industrial polyesters and polyurethanes based on renewable sources** (several projects are carried out to develop new aromatic polyesters and thermoplastic polyurethanes based on renewable and easily available sugars).
- **Synthesis of novel sugar based materials** (project in collaboration with industrial companies to develop new surfactant materials and chelating agents based on modified biopolymers to trap heavy metals from see water).

Some representative publications related to the research topic

- M. G. Garcia-Martin, M. V. de Paz Bañez, J. A. Galbis; Preparation and reactivity of some 3-deoxy-D-altronic acid derivatives, *J. Carbohydr. Chem.* **20**, 145-157 (2001).
- M. G. Garcia-Martin, M. V. de Paz Bañez, M. Garcia Alvarez, S. Muñoz-Guerra, J. A. Galbis; Synthesis and structural studies of 2,3-disubstituted poly(β -peptides)s, *Macromolecules* **34**, 5042-5047 (2001).
- I. Molina Pinilla, M. Bueno Fernández, F. Zamora Mata, J. A. Galbis; Carbohydrate-based copolymers. Synthesis and characterization of copoly(ester amide)s containing L-arabinose units, *Macromolecules*, **35**, 2977-2984 (2002).
- M. Mancera, I. Roffé, S. S. J. Al-Kass, M. Rivas, J. A. Galbis; Synthesis and characterization of new stereoregular AABB-type polyamides from carbohydrate-based monomers having D-manno and L-ido configurations, *Macromolecules*, **36**, 1089-1097 (2003).
- I. Molina Pinilla, M. Bueno Martínez, J. A. Galbis; Synthesis of 2,3,4,5-tetra-*O*-methyl-D-glucono-1,6-lactone as a monomer for the preparation of copolyesters, *Carbohydr. Res.*, **338**, 549-555 (2003).
- M. Mancera, F. Zamora, I. Roffé, M. Bermúdez, A. Alla, S. Muñoz-Guerra, J. A. Galbis, Synthesis and properties of poly(D-mannaramide)s and poly(galactaramide)s, *Macromolecules*, **37**, 2779-2783 (2004).
- M. G. Garcia-Martin, R. Ruiz Perez, E. Benito Hernandez, J. L. Espartero, S. Muñoz-Guerra, J. A. Galbis; Carbohydrate-based polycarbonates. Synthesis, structure and biodegradation studies, *Macromolecules*, **38**, 8664-8670 (2005).
- C. E. Fernández, M. Mancera, E. Holler, J. A. Galbis, S. Muñoz-Guerra; High molecular weight methyl ester of microbial poly(β ,L-malic acid): Synthesis and crystallization, *Polymer* **47**, 6501-6508 (2006).
- M. G. Garcia-Martin, R. Ruiz Pérez, E. Benito Hernández, J. A. Galbis; Linear polyesters of the poly[alkylene (and co-arylene) dicarboxylate] type derived from carbohydrates, *Macromolecules*, **39**, 7941-7049 (2006).
- M. V. De Paz, R. Marín, F. Zamora, K. Hakkou, A. Alla, J. A. Galbis, S. Muñoz-Guerra; Linear polyurethanes derived from alditols and diisocyanates, *J. Polym. Sci., Part A: Polym. Chem.*, **45**, 4109-4117 (2007).
- M. V. De Paz, J. A. Aznar, J. A. Galbis; Versatile sugar derivatives for the synthesis of potential degradable hydrophilic-hydrophobic polyurethanes and polyureas, *J. Carbohydr. Chem.*, **27**, 120-140 (2008).
- F. Zamora K. Hakkou, A. Alla, R. Marín-Bernabé, M. V. De Paz, A. Martínez de Ilarduya, S. Muñoz-Guerra, J. A. Galbis; Polyesters analogous to PET and PBT based on *O*-benzyl ethers of Xylitol and L-Arabinitol, *J. Polym. Sci., Part A: Polym. Chem.*, **46**, 5167-5179 (2008).

Congress and meeting contributions and lectures and conferences on the research topic

- About 160 communications to national and international congress.
- Invited lectures and conferences in Scientific congress and Universities (about 20).

Membership in Professional Societies

- Real Sociedad Española de Física y Química
 - Grupo Especializado de Química Orgánica (RSEQ)
 - Grupo Especializado de Polímeros (RSEQ)
 - Grupo Especializado de Carbohidratos (RSEQ)
- American Chemical Society
 - Polymer Chemistry and Polymeric Materials division (ACS)