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PROF. DR.
JOSÉ ANTONIO LUPIÁÑEZ

University of Granada
Spain

Department of Biochemistry and
Molecular Biology I

About J. A. LUPIÁÑEZ

- **Full Professor in the Department of Biochemistry and Molecular Biology I of the University of Granada (Spain) since 1989.**
- **Head of this Department since May 2014.**
- **Master Thesis entitled *"Succinic acid production by Saccharomyces cerevisiae grown under hypoxic conditions"*, realized in the Department of Biochemistry and Molecular Biology and defended in the University of Granada in July 1972. Qualified as "high distinction" and special award.**
- **Ph.D. Thesis entitled *"Induction of renal gluconeogenesis by selective inhibition of hepatic gluconeogenesis"* realized in the Department of Biochemistry and Molecular Biology and defended in the University of Granada in September 1975. Qualified as "distinction cum-laude" and special award of doctorate.**

Teaching career

- ***Teaching in Grade Courses***:

  "General Biochemistry"," Structural and dynamic Biochemistry", "Expansion of Biochemistry", "Metabolism regulation", "Control and Integration of cellular metabolism", "Enzimology and kinetics", "Molecular Basis of the Human Pathology". These subjects have been teaching in the degrees of Chemistry, Biology, Pharmacy and Biochemistry.

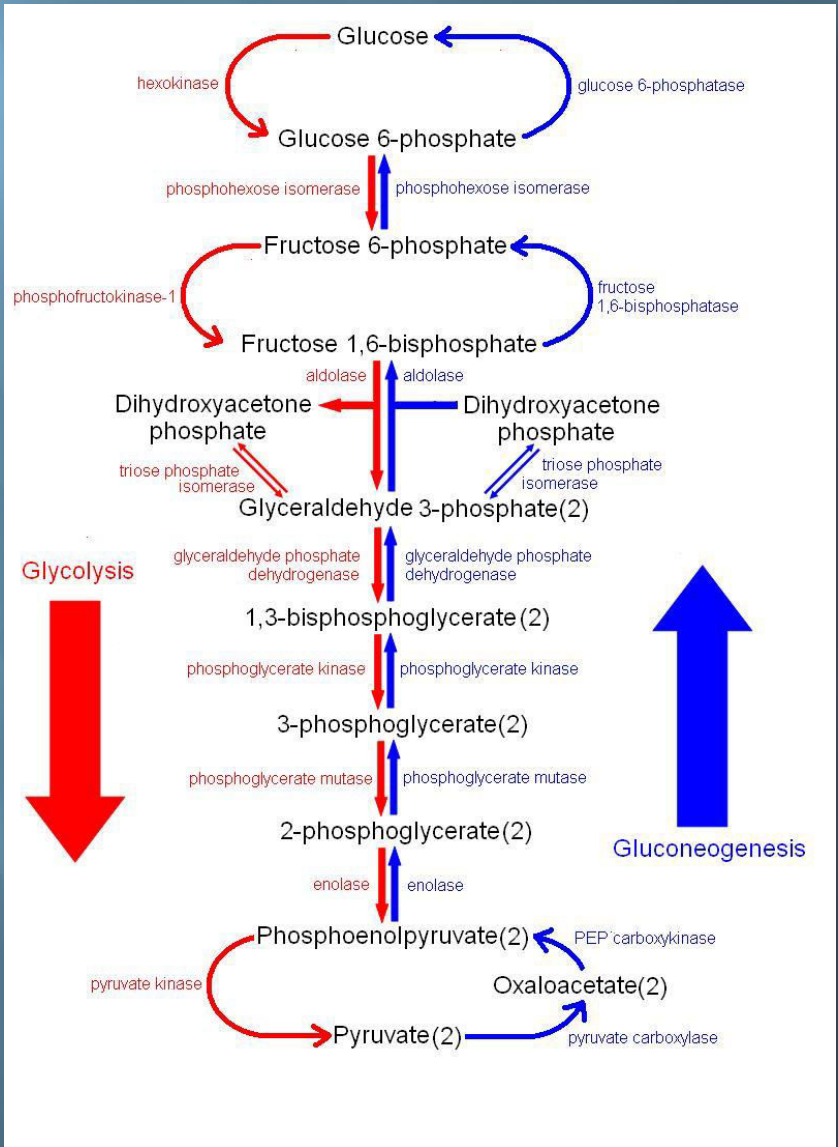
- ***Teaching in Master Courses*:**

  Doctoral Program: "Biotechnology and Proteomics"; Course: *"Proteomics and protein dynamics"* from 2006 to 2014. Doctoral Program: "Biochemistry and Molecular Biology"; Course: *"Enzymatic determinations. Kinetic studies*" from 1999 to 2005. Course: "*Renal metabolic homeostasis*" from 1996 to 1998. Course: "*Regulation of protein turnover*" from 1994 to 1995. Doctoral Programs: "Biochemistry and Molecular Biology" and "Experimentation and methodology in molecular biological systems"; Course: "*Renal metabolic homeostasis*" from 1987 to 1991. All years inclusive.

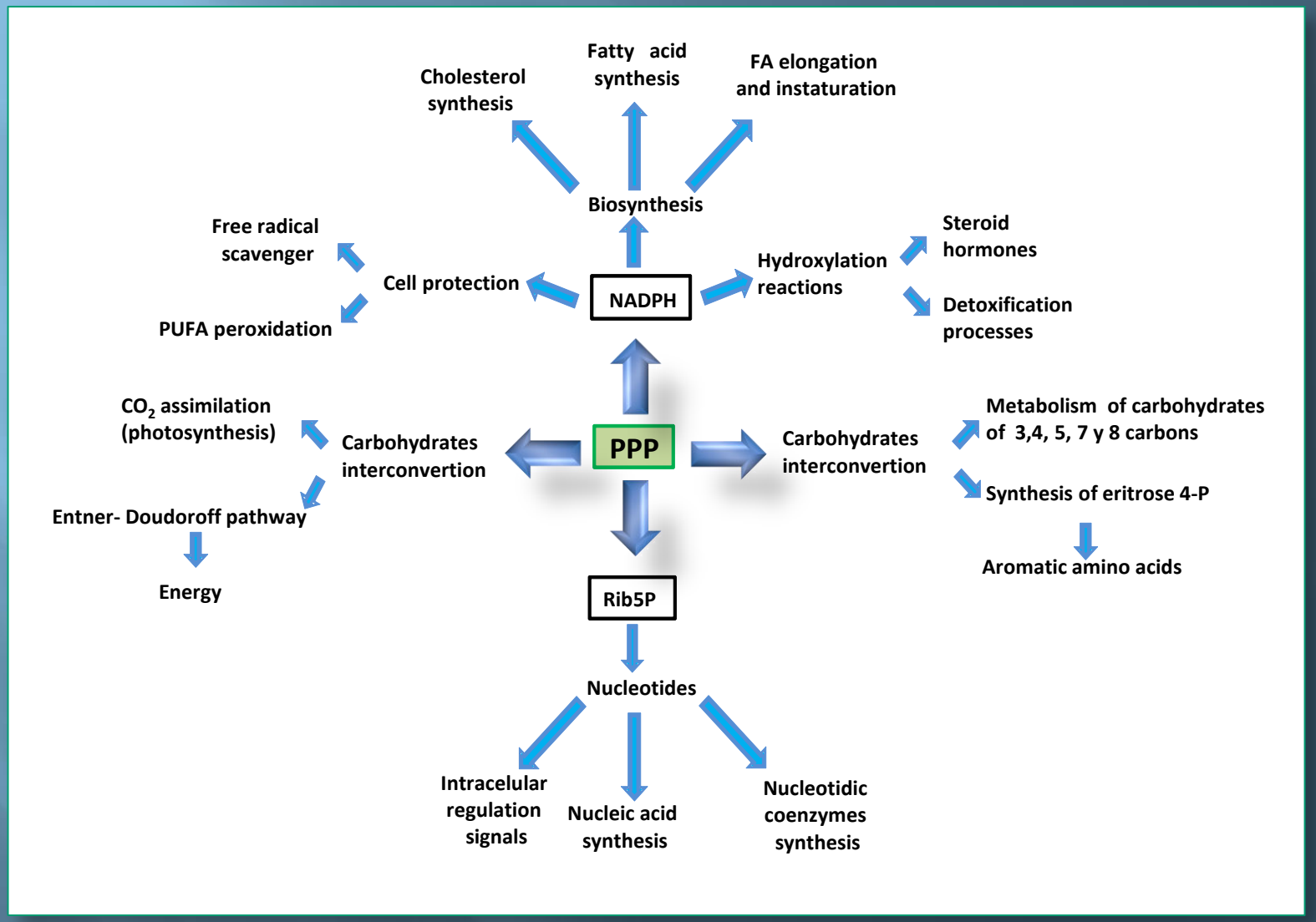
Research career

- Carbohydrate metabolism and its regulation
- Enzimology and kinetics
- Metabolism and evolution
- Cell growth: Protein synthesis and degradation
- Cell proliferation and Apoptosis
- Cancer, metastasis and angiogenesis
- Oxidative stress
- Genomic, Proteomic and Metabolomic

Glucose metabolism



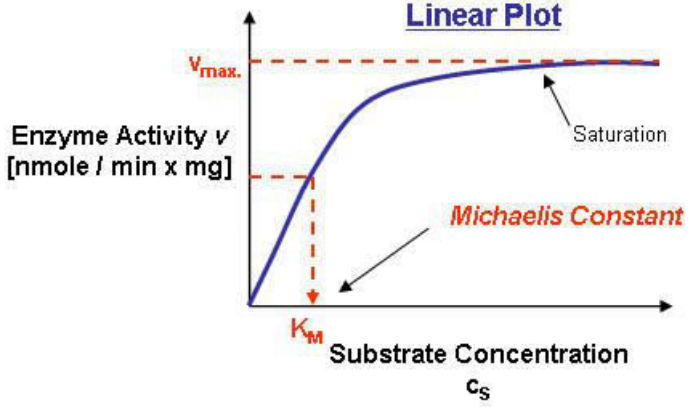
Pentose phosphate pathway



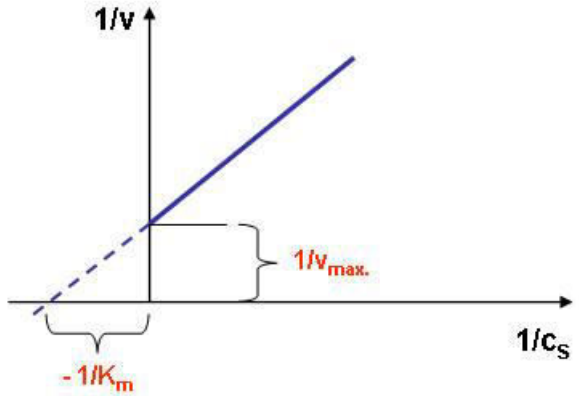
Enzimology and kinetics

Experimental Result

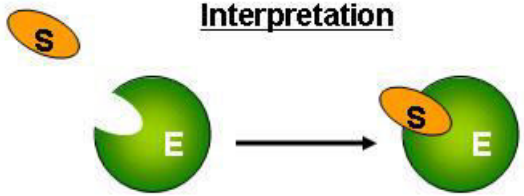
Linear Plot



Lineweaver-Burk Plot



Interpretation



Mathematical Description

Michaelis- Menten Equation

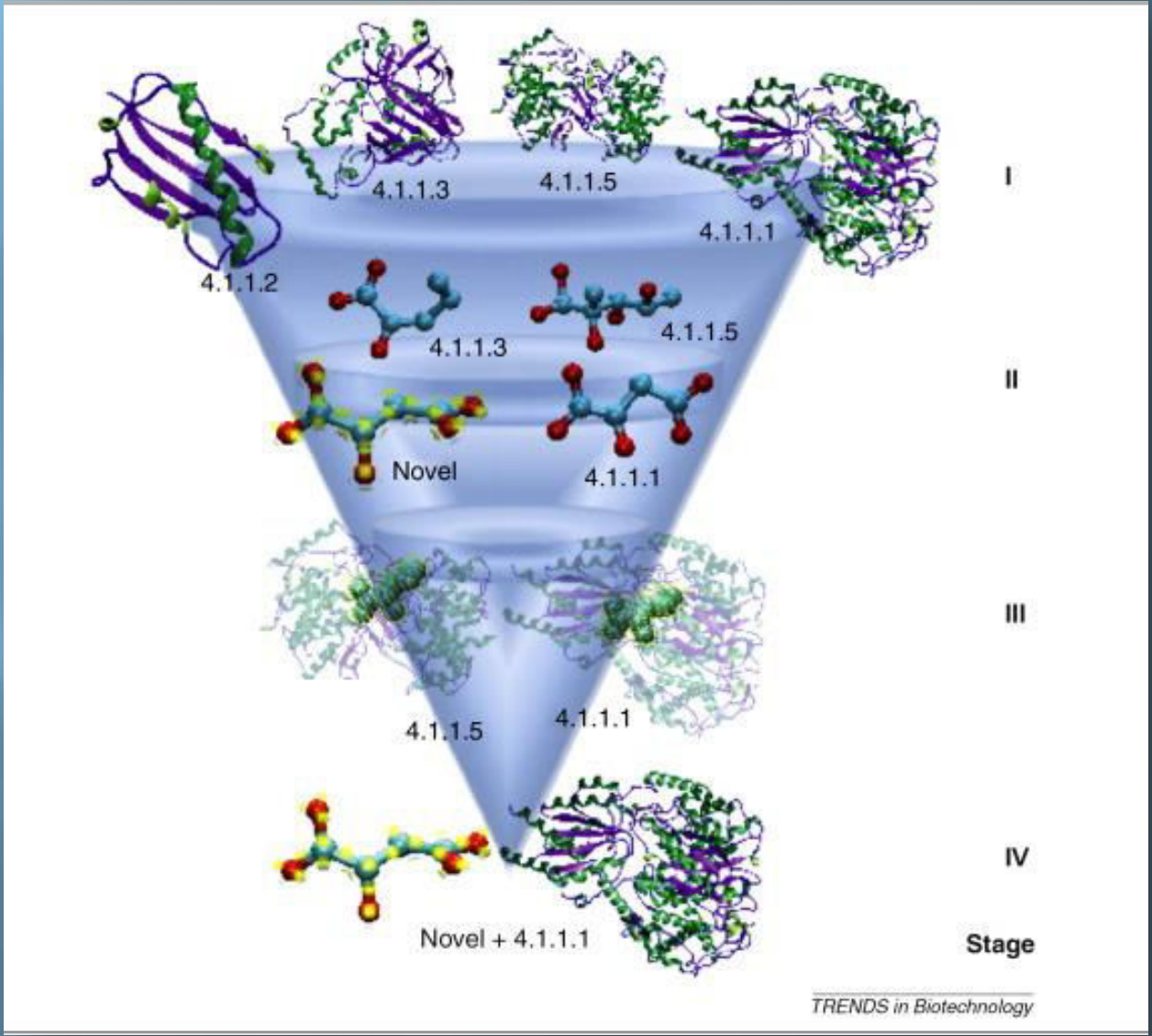
$$v(c_S) = \frac{v_{max} \times c_S}{K_M + c_S}$$

Lineweaver-Burk Equation

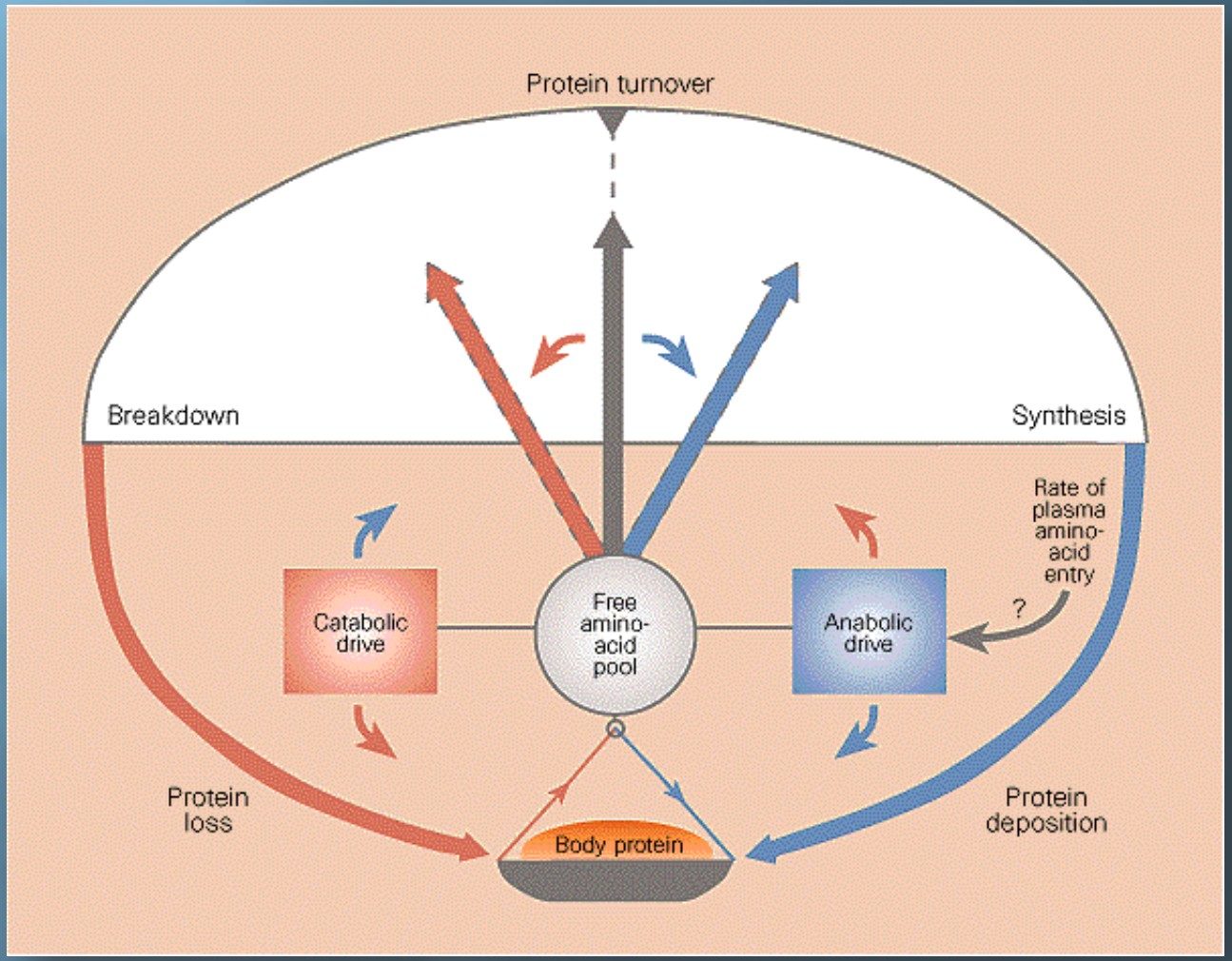
$$\frac{1}{v} = \frac{K_M}{v_{max}} \times \frac{1}{c_S} + \frac{1}{v_{max}}$$

→ The Michaelis-Menten kinetic describes the most simple, "ideal" situation of enzyme catalyzed chemical reactions

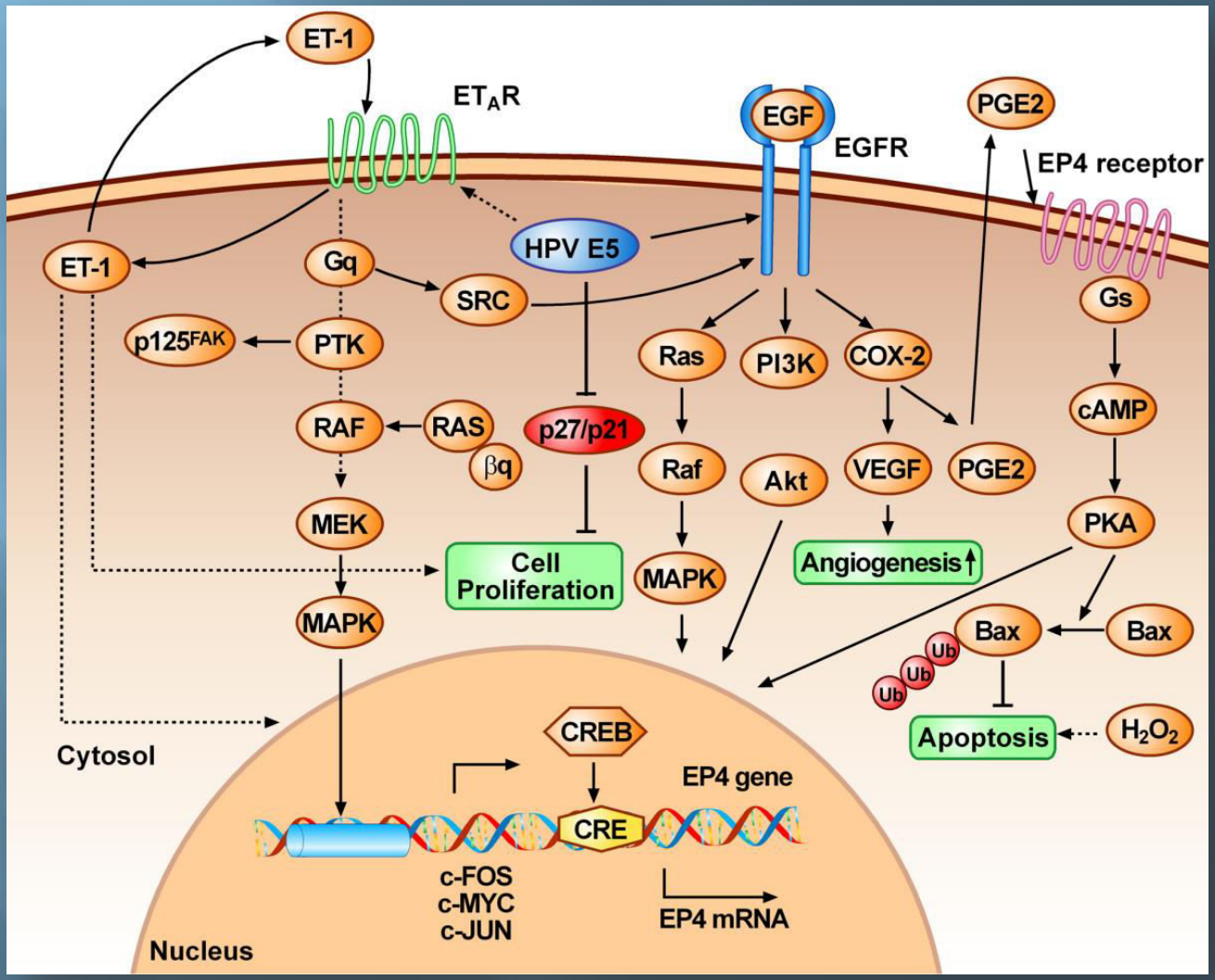
Metabolism and evolution



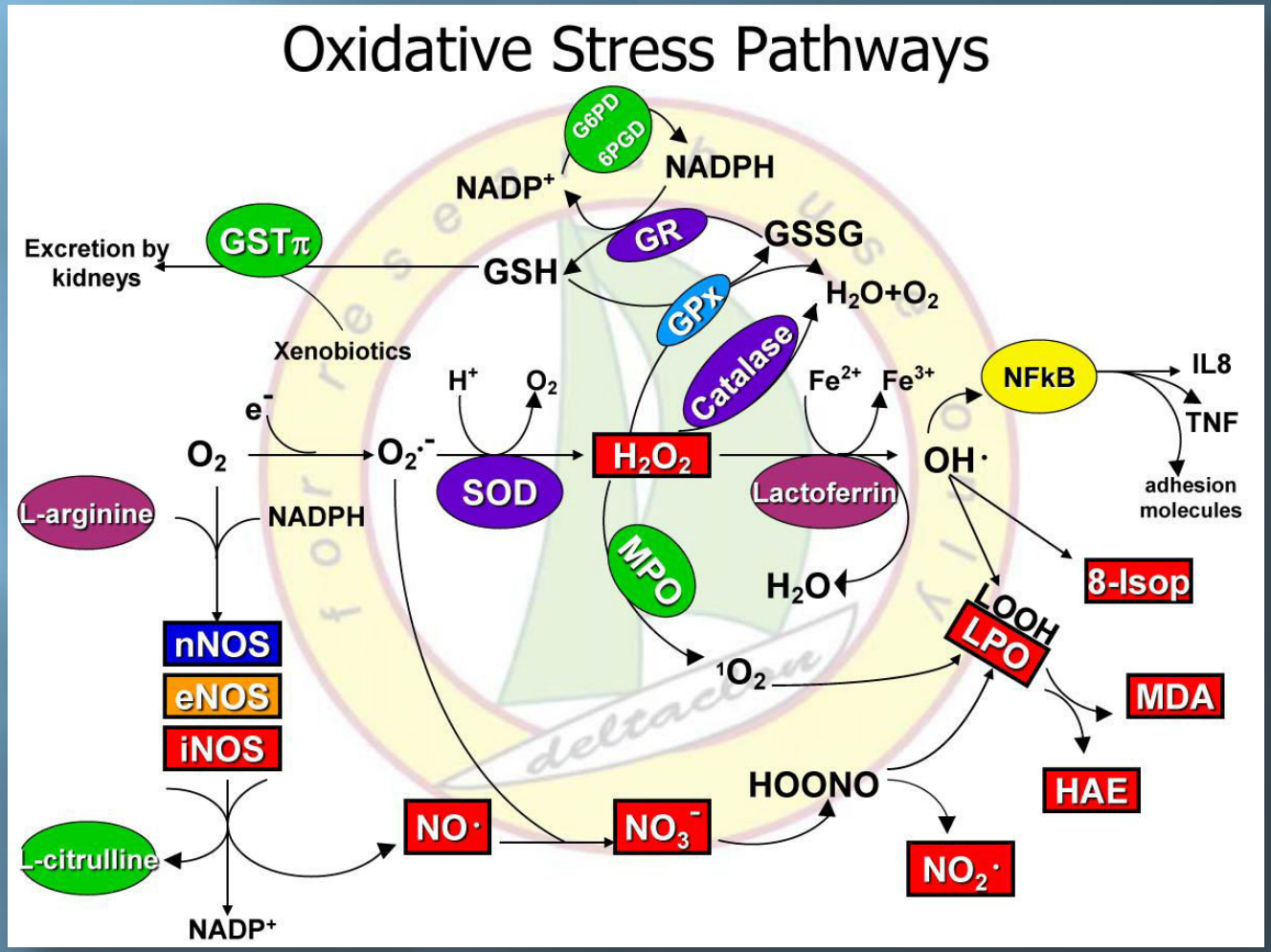
Cell growth: Protein synthesis and degradation



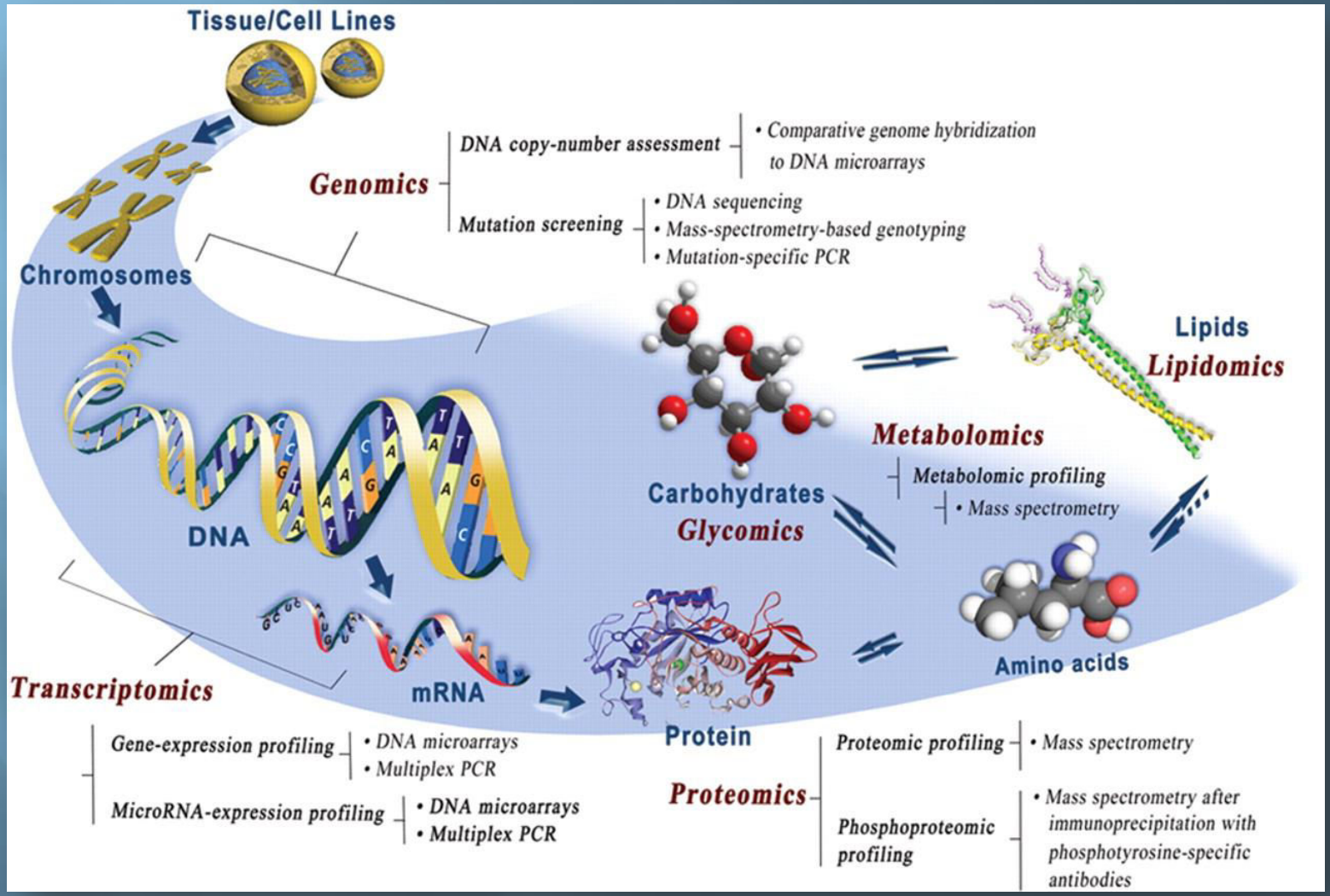
Cell Proliferation and Apoptosis Metastasis and Angiogenesis



Oxidative stress



Genomic, Proteomic and Metabolomic



Signature

Digitally signed by NOMBRE LUPIÁÑEZ CARA JOSÉ ANTONIO - NIF 23662390J
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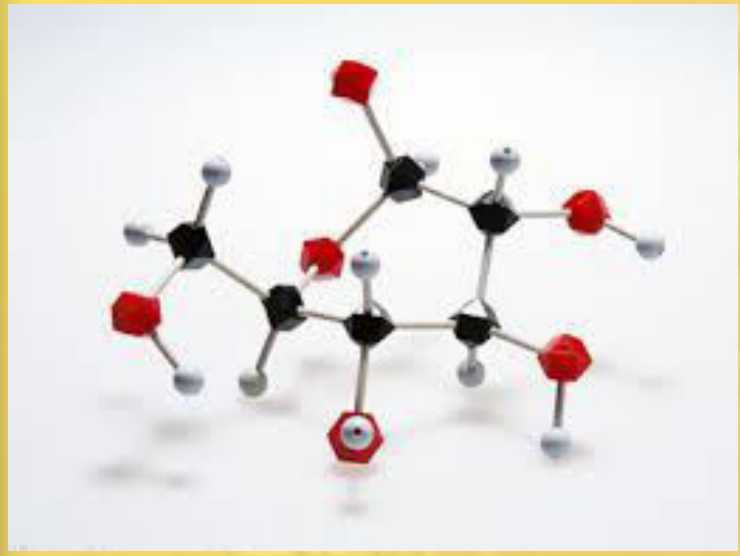
Medicinal chemistry Related Journals

- Drug Designing: Open Access
- Biochemistry & Pharmacology
- Advances in Pharmacoepidemiology & Drug Safety



Medicinal chemistry Related Conferences

- 3rd International Conference on Medicinal Chemistry & Computer Aided Drug Designing

- 3rd International Conference and Exhibition on Pharmacognosy, Phytochemistry & Natural Products

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