Adriano Afonso, PhD

Research Scientist and Inventor

Adriano was born in Panjim, Goa, into a family of scientists. Son of Joaquim Bossuet Afonso and Albertina Dias Afonso from Betalbatim. His eldest brother Emidio (1916-1990) and Skoda (1923-1992) were also scientific celebrities in their own rights.

He died in New Jersey in 2010 from complications of brain cancer at the age of 75. Surviving are his wife Beverly Schunk, children, Suzanne, Eric and Christina.

He obtained his BSc. and MSc. in 1957 at University of Bombay and PhD in organic chemistry, under S. Morris Kupchan in 1961, from the University of Wisconsin. After postdoctoral research at Indiana University, in 1963 he joined Schering-Plough[1] Research Institute, Chemical Research, where he spent his lifetime career in the discovery of drugs, and retired in 1999, as a Senior Research Fellow.

Emidio Afonso and his brothers, Álvaro and Adriano.

He founded the Afonso Foundation, which engages in educational activities with existing organizations in Goa and the U.S. and counseling to families in crisis.

He is credited with the discovery of the cholesterol lowering drug Zetia.® His pioneering work for the process of the synthesis of penems[2] is still used today.

His research work is documented in 37 U.S. patents and several scientific publications, including a process for preparation of steroidal compounds, antiviral and anti-hypertensive compounds.[3]

A sampling of patents and his many publications[4]

US 5942522 (1999)	Antiviral compounds and antihypertensive compounds
US 5945429 (1999)	Compounds useful for inhibition of farnesyl protein transferase
US 6133291 (2000)	N-(imidazolylalkyl)substitutedcyclicamines as histamine-H.sub.3 agonists or antagonists.
US 6130229 (2000)	Tricyclic compounds having activity as RAS-FPT inhibit**ors.**
US 6124295 (2000)	Compounds useful for inhibition of farnesyl protein transferase
US 5,684,013	2-[(1'R)-1'-Aminoalkyl] penems.
US. 5,684,013 (1997)	Tricyclic compounds useful for inhibition of g-protein function and for treatment of proliferative diseases.
US 4540580 (1985)	2-[(1'R)-1'-Aminoalkyl] penems - (Potent antibacterial agents)
US 4382948	d-thio)-1-carbapen-2-em-3-carboxylic acids and congeners:

Publications:

The Journal of Antibiotics/52 巻 (1999) 4 号/書誌
Structure Elucidation of Sch 20562, a Glucosidic Cyclic Dehydropeptide Lactone - the Major Component of W-10 Antifungal Antibiotic.

Bioorganic & Medicinal Chemistry Letters, Vol. 8, Issue 23, 1 December 1998, pp.3391-3396, *Selective chemical modifications of polymyxin B*

J Org Chem. 1998 Aug 21; 63(17):6039-6042, *Acid-Catalyzed Rearrangement of 5-Bromo-3-[1-allyl-2-(3,5-dimethoxyphenyl)ethyl]-2-cyanopyridine*

Annals of the New York Academy of Sciences, *Selective Reductive Cleavage of a Threonine Peptide Bond in Polymyxin Antibiotics*, vol.471, Issue 1, International Symposium on Bioorganic Chemistry, June 1986, Pp.321-323.

Bioorganic & Medicinal Chemistry Letters, *Selective chemical modifications of polymyxin B,* Vol. 8, Is. 23, 1998, Pp. 3391-3396.

Tetrahedron Letters（1998, 引用0, 浏览5,EI引用.
Synthesis of a C11 spiropiperidino derivative of 8-chloro-6,11- dihydro 5H-benzo[5,6]cyclohepta[1,2-b]pyridine.

Cancer Research, 55. (21): 5106-5117, 1995
SCH 51344 Inhibits ras Transformation by a Novel Mechanism.

Notes:
1. Schering-Plough merged with Merck & Co. in 2009.
2. A penem is a type of β-lactam with an unsaturated five-member heterocycle containing a sulfur atom fused to the β-lactam ring. Antibiotics with a broad spectrum of antibacterial activity.
3. Chemical & Engineering News (March 7, 2011) https://cen.acs.org/articles/89/i10/Adriano-Afonso.html
4. Most of the patents are listed in - https://scholar.google.com/scholar?hl=en&as_sdt=0%2C34&q=Adriano+Afonso&btnG=

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