

**NOBEL: PREMIO A DUE AMERICANI E
UN'ISRAELIANA PER RIBOSOMA (ASCA-AFP) -**

Stoccolma, 7 ott - I vincitori del premio Nobel di quest'anno sono due americani,

Venkatraman Ramakrishnan e Thomas Steitz e l'israeliana Ada Yonath che hanno svolto un lavoro di ricerca sulla "struttura e la funzione del ribosoma".

Il comitato del premio ha riferito che il Nobel premia "l'istituzione di una mappa dettagliata del ribosoma che sintetizza le proteine delle cellule" e apre "una nuova strada per la scoperta di nuovi antibiotici".

Nobelpriset i kemi 2009



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Bibliografia essenziale

- N. Ban, P. Nissen, J. Hansen, P.B. Moore, & T.A. Steitz. The complete atomic structure of the large ribosomal subunit at 2.4 Å resolution. *Science* **2000**, 289, 905-920.
- A. Yonath, **Three-dimensional crystals of ribosomal particles**, [TIBS, 9, 227-30 \(1984\)](#)
- <http://www.mrc-lmb.cam.ac.uk/ribo/homepage/>

Telomeri Nobel 2009

- Elizabeth Blackburn, Carol Greider and Jack Szostak have discovered how the conserved function of chromosomal telomere repeat sequences protects against degradation and recombination events and have identified a new enzyme complex, telomerase, that is responsible for the synthesis of telomere DNA.
- Studies of telomerase and telomere maintenance have provided very important insights into areas of high medical relevance such as cancer, ageing and hereditary disease syndromes
- The discoveries have also led to the development of new therapeutic strategies for cancer treatment based on the targeting of telomerase activity or expression that are now undergoing clinical testing.

telomerase inhibitor GRN163L

- A synthetic lipid-conjugated, 13-mer oligonucleotide with potential antineoplastic activity.
- Complementary to the template region of telomerase RNA (hTR), telomerase inhibitor GRN163L as a competitive enzyme inhibitor that binds and blocks the active site of the enzyme
- Inhibition of telomerase activity in tumor cells by telomerase inhibitor GRN163L results in telomere shortening, which leads to cell cycle arrest or apoptosis.

Nobel telomerasi 2009

http://nobelprize.org/nobel_prizes/medicine/aureates/2009/