

BENEMÉRITA UNIVERSIDAD AUTÓNOMA DE PUEBLA



**INSTITUTO DE FÍSICA
“Luis Rivera Terrazas”**



**SEMINARIO EXTRAORDINARIO
“DR. JESUS REYES CORONA”**

“Longevidad, Envejecimiento y Cáncer: Termodinámica y Complejidad”

Dr. José Manuel Nieto Villar
Departamento de Química-Física,
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From the formalism of the thermodynamics of irreversible processes and the theory of complex systems, a characterization of longevity and aging and its relationship with the emergence and evolution of cancer was performed. The main results are summarized as follows: 1. Theoretical models were developed that qualitatively describe the chronotherapy of cancer, 2. A theoretical model of the epithelial-mesenchymal transition (EMT) was developed during the metastasis process, 3. The entropy production rate was evaluated from calorimetric data of human metabolism of healthy and sick people with metastatic carcinoma of different ages, 4. A theoretical model of the longevity of “mole rats” was developed that demonstrates its resistance to cancer and reactive oxygen species, ROS.

Auditorio-IFUAP

Miércoles 13 de Noviembre de 2019

13:00 Hrs.