Quantum Bio Physics III: Self Organization in Nature- Case Studies
The self-organization of flowering in time and space

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The beautiful flowering of plants is one of the most important phenomena in the living cyclic development of nature. Classical studies have highlighted the importance of signals of *photo-period* (perceived in the leaves), in stimulating flowering time. More recently, biologists identify a *plant-gene T* , producing a *protein (FT)* , that work as a molecular switch off working as a key-mediator of signals for inducing the "Flowering" time- developmental pathway . (1)

Knowing what the molecular switch is not in itself sufficient to understand the complex phenomena of *plant's flourishing*, it become clear the necessity to better understand what is the field of energy that is activated by the *molecular switch on//off*, in order to trigger together various events made during the flowering plants, in a synchronic coordination the various processes of *self-organization,* that are associated with photosynthesis and photo-periodicity .

This short article would be useful for understanding such co-ordination phenomena and to comprehend, how the flowering temporal activity, depends to the *nano-scale events*, related to the dynamics of the light-harvesting process of photosynthesis in leaves. In fact current studies suggests that *nano-tubules and related nano filamentous elements*, play a fundamental role as functional pathways in an every greater variety of sub-cellular structures growth and living functions. In fact the importance of *micro-tubules and micro-filaments,* can be searched in the activity of synchronizing the spatial and temporal regulation of morphogenetic events in higher plants, in order to control various factors of cell's division and differentiation through of a synchronic regulation. Therefore leaves and plant stems co-operate for generating flowers developmental synchronicity are depending by the activity of some nano- structure interfaces, that are extremely important for plant survival and performance.

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Moreover, current thinking refers about "*quantum entanglement*" activities in many factors of natural co-operation, in a way to better to understanding how the *Entanglement//Disentanglement* process can be an important resource for quantum information processing in relation to *a de-localised field* in which can occur simultaneity on the basis of an *distributed and shared available information .* (2)

Given that interactions create and modify the space and time structure, the *quantum-entanglement* interactivity, is capable to turn out the traditional space time *quadric-vector*, in a structured based on two dimensional " *information energy*" field (I) . This energy field is created through the cavities of micro-tubes through an strong interference, caused by the enrichment of the limit of the Q. waves "*shock compression*", in a way to transform the *quantum information* carried by the interaction, into mixed entangled states of phonons. So that that *via the process of entanglement*, a component of space is annulled , on the basis of a coherent *negative interference of Q. waves* in nano-tubules. Therefore throughout the *entanglement* occurs a significant alterations of the structure of wave-fronts; so that a component of the three-dimensional space is erased for destructive interferences of quantum waves. The above imposing interactive distortion, permits to duplicate the time in a new dimension of *retroactive timing amplification* of mutual pulses, *normally functioning around pico- and femto- second timescales*. In that way it become possible that *protein (FT)* , works as a molecular *switch on//off,* activating *entanglement//disentanglement* effect, so as to utilize the *simultaneity of communication* of active *information energy* (I) and to get the function of triggering *"FT"* as a key-mediator, for inducing the *Flowering time- developmental response* . In this contest of *flowering activity,* everywhere in different plants , the *information energy* field (I) operates as a *no local field, as a mean to favour a distributed shared information* ,available for common reference, to any cooperative agent, with the purpose of modulate in a coherent synchronism for each *self –organization process*, based on internal and extra-cellular signals cooperation , that would be *mediated by a molecular switch on/off devices*.

In conclusion, as is the case study of *flowering of plants*, nature make use of the activation process of *quantum –entanglemen- effect* to give rise to an extensive system of *simultaneous information energy* (I) , to be able *to coordinate the timing of events in cyclical or non-linear self-organization* in order to *characterise the continuous change of the periodic renewal of life*.

BIBLIO IN LINE

(1)- Flowering : http://jxb.oxfordjournals.org/cgi/content/full/57/13/3415
(2)- Disentanglement : http://www.wbabin.net/science/manzelli28.pdf

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