



LES RELATIONS ENTRE LA RECHERCHE EN GENETIQUE/ BIOLOGIE MOLECULAIRE ET LA PRATIQUE MEDICALE

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Contre la vision moléculaire : le cancer comme une maladie du développement

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In collaboration with Ana Soto, we co-authored a book entitled THE SOCIETY OF CELLS (Bios-Springer-Verlag, 1999) in which we critically evaluated the status of research in the admittedly anarchic field of cancer. Our major contributions discussed in the book were: 1) the default states of all cells are proliferation and motility, and 2) both so-called sporadic cancers (>95% of all clinical cases) and inherited cancers represent diseases specifically anchored at the tissue-level of biological organization. These became in fact the postulates that represent the core of the tissue organization field theory of carcinogenesis (TOFT). This novel theory competes with the century-old somatic mutation theory (SMT) that proposes, instead, that cancer is a cell-based, molecular, genetic disease and that quiescence is the default state of metazoan. In 2004 and 2005, our lab has been able to test both theories under a theory-neutral experimental design. The outcome of this test has been as favorable to TOFT and unfavorable for SMT. As a result of this and other factors, we are postulating that cancer represents an example of development gone awry. Based on empirical data, our views are gaining grounds and adepts. During my presentation, I will present evidence compatible with the conclusions we have already drawn and propose an alternative way to explain carcinogenesis and mention implications of our alternative views when compared with those promised by the century-old, currently hegemonic SMT.