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Many cellular substances are proposed to be signaling molecules between genetic information in nucleus and biochemical processes occurring in cytoplasm. Nevertheless, the molecular mechanisms by which these putative substances initiate, for example, transcription is unknown. It is not clear how a cell knows which gene (from about 30,000) should be transcribed at this time. We propose that messengers between accession to genetic information and biochemical processes that occurs in accordance with this information are small molecules of DNA named as keys to the gene (i.e. a parole). All cellular organelles are supplied by such genetic keys. We believe each gene/cluster has a lock which is also composed of DNA, and disposed on one nucleosomal triplet. Usually all genes/clusters are closed for transcription and can be open only by such keys that are separated from cellular organelles during programmed synthesis or damaging (physically or in oxidative reactions) of cellular structures and together with DNA-polymerases transcribe needed genes in accordance to proposed scheme:

The first response to physical or chemical stresses is separation of genetic keys from plasmalemma, their conjugation with genetic locks and DNA-polymerases, and transcription initiation. This is the quickest general nonspecific reaction, i.e. it does not depend on the nature of exogenous effectors resulting in transcription of identical RNA molecules in any time to any factor.

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