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**UPPER CRETACEOUS-TERTIARY STRIKE-SLIP TECTONICS IN NE LIBYA:
EVOLUTION WITHIN DEXTRAL SPLAY DUPLEX STRUCTURE**

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Al Jabal Al Akhdar belt about 360 by 50 km², in northeast Libya, represents a NE-SW inverted basin during Upper Cretaceous-Miocene and exhibits complex structural pattern, which still far from being completely understood.

The structural pattern reflected evolutionary inversion by style of wrenching tectonics proceeded elsewhere via transpression, in response to a dextral compressional shear. It is themed by NE-SW ductile-brittle shear zones that confine a system of E-W to ENE-WSW trending folds, WNW-ESE dextral strike-slip faults (Riedel shears R₁), N-S sinistral strike-slip faults (conjugated Riedel shears R₂), ENE-WSW minor thrusts and pop up structures, NNW-SSE normal faults, pull apart basins and accompanied joints. Deformation synthesis on the present structures showed four phases of folding (F₁, F₂, F₃ and F₄) related to the movement on consistent sequence of faulting during Late Cretaceous-Miocene. F₁ to F₃ folding phases are formed within and before outlining the spectacular shape of F₄ major folds (ex. Jardas Al Abid and Ras El Hilal). These folds are the result of successive tectonic stages initiated by intense and tight folding in Santonian, close folding during Campanian-Maastrichtian then open in Eocene and gentle folding in the Oligocene-Miocene.

Originally, the whole structure revealed a tectonic evolution within splay strike-slip duplex, which played an important role in the development of escarpments along the western part of Al Jabal Al Akhdar.

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