



genes are red Down-regulation, green Up-regulation, beige Regulation, purple Co-expression, brown Physical Interaction, turquoise dotted Predicted Protein Interaction, and mauve dotted Predicted TFactor Regulation [4].

The contributions of miRNAs to synaptic plasticity are extensive study. For example, CREB (cAMP responsive element binding protein), MECP2 (methyl CpG binding protein 2), and FMRP (fragile X mental retardation protein) interact with miRNAs in their role as mediators of synaptic plasticity within dendrites. The RISC machinery is utilized post-DICER action, producing the miRNAs *in situ* as above. Post-translation inhibition occurs for these proteins following bursts of synaptic activity mediated by the rapid increase of calcium levels. These activities occur in mouse forebrain and are involved in long-term memory in *Drosophila* [5] (Figure 2).

The two figures illustrate various gene interactions, up to 100 [4]. It is left as a puzzle for the interested reader to identify the various genes and their functions in the figures [6].

#### **Acknowledgment:**

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#### **References:**

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