Type 1 diabetes (T1D) is a chronic autoimmune disorder caused by destruction of the insulin secreting cells, resulting in hyperglycemia. While genetic factors play a major role in its pathogenesis, they do not explain differential susceptibility to T1D across monozygotic twins with identical genomes.

Environmental influences:
- Viral infections
- Gut microbiota
- Diet
- Stress

Genetic factors:

Epigenetic mechanisms:
- DNA methylation
- Post-translational histone modifications
  - Acetylation
  - Methylation

Non-coding RNAs:
- MicroRNA
- Long non-coding RNA

Potential use:
- Risk assessment
- Diagnostic biomarkers
- Therapeutic targets

Environmentally induced epigenetic changes involved in T1D can be potentially useful in devising diagnostic and therapeutic measures.

Implication of epigenetic factors in the pathogenesis of type 1 diabetes

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