

CHAPTER V

CONCLUSION

In conclusion, the present study emphasized that petrol pump workers are exposed to gasoline, its derivatives and dust particulate matters associated with an increased of DNA damages on the peripheral blood lymphocytes. This study found a significant excess of DNA damage and structural chromosome aberrations in workers who were occupationally exposed to gasoline and air pollutants, compared to the matched controls. These findings confirm the potent genotoxic effect of gasoline and air pollutants as an inducer of DNA damage and structural chromosome aberrations.

Both methods, chromosome aberration test and comet assay, are sensitive biomonitoring tools for the evaluation of DNA damage level. The methods can assess in small sample size, but the comet assay is more sensitive for the detection of DNA damages.

Genotoxic biomonitoring in petrol pump workers is necessary to guarantee occupational health and identify individuals or groups with elevated DNA damage and increased risk of having health problems and neoplasia. Additionally, the workers should be educated about prevention measures to reduce their exposure and thereby reduce genetic damage, serious illness and long term effects such as cancer development.