The Importance of Protocol Design and Data Reporting to Research on Endocrine Disruption

Several recent articles have discussed the dangers exposed by some scientists regarding the validity of endocrine disruption studies conducted by industrial veterinarians or sponsored by the chemical industry [1-3]. The lack of regulation and the secrecy that surrounds these studies has made it difficult for anyone to understand the origin of Safe and Unbiased Chemical Test Results [1].

It is in the nature of any new branch of toxicology that, at least initially, adverse effects are found in the test systems set up to test substances that are thought to be non-toxic. Such confirmatory studies are usually necessary because the initial publications often do not contain sufficient data to be evaluated, and the results are not compared with the original toxicological studies. When these studies are discussed, it is often the case that they are not based on data derived from independent test protocols. This makes it difficult to conduct meaningful studies on the results of these studies. However, it is essential that these toxicological studies be properly evaluated.

Recent studies showed that the exposure to certain chemicals was associated with a decrease in sperm production in men. However, it was difficult to confirm this association because the studies were not designed to test for such effects. In addition, the results were not always consistent, and the data used to support these conclusions were often based on inadequate sample sizes. Therefore, it is important to carefully evaluate these studies to ensure that the results are reliable and valid.

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our experimentation could eventually be used to \text{discriminate our findings, should they happen to not agree with the original observations.}

It seems important that all experiments in the rapidly expanding area of endocrine disruption and neonatology should be carefully designed and fully reported. The use of concurrent perinatal and control groups also seems to be crucial. These needs are independent of who conducts or sponsors studies. Good science is good science. Finally, it should be noted that the only formal retraction of endocrine disruption data currently encountered derived from an academic laboratory, a(substantial counterbalance to the assertions that stimulate this letter (1-3).

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References and Notes


plain that new results are published from unreplicated experiments when, to be consid- ered a valid replication, it requires that the experiment must be conducted by different sci- entists who are in agreement on the existence of the difference. However, it is interesting that Adams and Ohman acknowledge that it is a time where such new research may be more easily dismissed.

In 1992, a consensus statement was published by a diverse group of scientists who attended the first meeting devoted to the issue of endocrine disruption. There was consensus that "the effects are now often manifested in males, not in the exposed parent, and although crucial evidence occurs during embry- onic development, obvious manifestations may not occur until maturity" and that there is "a lack of multi-generational exposure studies that simulate wild-type concentrations of poten- tial endocrine disruptors (16). Despite the consen- sus on 1992, there has been a lack of progress in the field, and in some subsequent publica- tions, it appears that critical industry research on estrogen disruptors may not have been conducted because of the fear of finding new adverse effects. A related problem is that the availability of industry-funded research will be an issue as long as the industry can be shown to be aware of the potential risks and has taken steps to mitigate them. It is important to note that the new adverse effects will be apparent more readily when studies are conducted in the field and not in the laboratory.

Moreover, the lack of progress in the field has been highlighted by the lack of research funding. The National Institutes of Health (NIH) and the Environmental Protection Agency (EPA) have provided limited funding for research into endocrine disruption, and the majority of the research that has been conducted has been funded by the industry itself. This has led to a lack of independence in the research and a bias towards negative results. In addition, the lack of funding has led to a lack of collaboration between researchers, which has hindered progress in the field.

Furthermore, the lack of progress in the field has been exacerbated by the lack of regulation. The Food and Drug Administration (FDA) has been slow to regulate the use of endocrine disruptors in the environment, and the EPA has been slow to regulate the use of endocrine disruptors in consumer products. This has led to a lack of accountability and a lack of transparency in the use of endocrine disruptors.

In conclusion, the lack of progress in the field of endocrine disruption is a major concern. The lack of research funding, the lack of regulation, and the lack of accountability have all contributed to the slow progress in the field. It is important that the research community and the regulatory agencies work together to address these issues and ensure that the potential risks of endocrine disruptors are properly understood and managed.

References: