

## **Morphology and simulation of nature as a basis in environmental architecture**

**(Examples of Arab and European environmental architecture)**

**Axis: The impact of the environment in the formation of architectural patterns distinctive Arab and European societies**

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### **Research Summary:**

The study deals with the importance of studying the ecological architecture of nature and living organisms as one of the directions of architectural development of architecture. It is supposed to shed light on the importance of benefiting from the biological sciences in the field of modern architectural design and its impact on human behavior and public health. This study is in the study of (morphology), which is one of the vital biologists of the present time, where the designer was able to come up with some design solutions that helped create a healthy environment less polluted and energy saving and exploits the natural environmental resources to optimize utilization while taking advantage of progress Technology, and this will be discussed in the explanation and examples in some Arab and European environments.

Design ideas must combine biological science and architecture to achieve the integrated unity of the building, the environment and technology. Nature is an inexhaustible source. These are the most important modern design strategies. Successful examples in the field of environmental simulation are: And the Hospital de Especialidades Hospital in New Mexico, where the facade of the hospital was built with a distinctive technology that can purify the surrounding air. The designer was able to imitate plants and natural trees that have the properties and the ability to absorb And the air purification such as trees (pine / cypress / etc ..), reducing the speed of wind and dust, which reduces pollution, and other projects and architectural buildings, which was able to simulate nature and natural phenomena, which will be referred later in the research.

The problem of finding how to access the design of an innovative architectural environment of nature through previous studies of the morphology of living organisms and transfer the characteristics of living organisms to the field of architecture and achieve the highest use of them designally and functionally and aesthetically inside and outside the building as the building must be an integral part and balanced with the surrounding environment , Which affects positively on the behavior of individuals and fulfills their requirements, which is also one of the most important goals and requirements of research, as it is necessary to exchange science and experience between different scientific bodies, and the results of the research need to pay attention to nature and vital studies as the morphology of the And the importance of the cooperation of several scientific bodies and different disciplines to raise the efficiency and ability of the designer and to find solutions to environmental design balanced and adaptive and environmentally friendly as it improves human behavior and the availability of individual requirements.

### **Keywords:**

Bioscience, morphology, nature simulation, design thought, environmental architecture