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**Bio Emulation: Let Nature Guide You!**

Dental science is experiencing rapid developments, which are accompanied by increased financial costs and a vast array of dental materials. However, the lack of standardizations has led to a paradoxical situation when it comes to making choices, resulting in conceptual differences regarding restorative strategies.

For these reasons, a new generation of thought derived from the biomimetic concept aims to enable clinicians and technicians to fully restore the histo-anatomy of diseased tissue with the proper spatial separation. This approach improves both functional and optical integration through more rational, satisfactory, and cost-effective restorations.

Biomimetics is a new concept in medicine, and in dentistry, it has so far found its application in regeneration at the molecular level. The benefits of its use at the macrostructural level are enabling the introduction of new concepts in restorative dentistry. The essence of biomimetics is that restorations should function like natural teeth in terms of transferring flexion and stress, as well as achieving aesthetics.

Biomimetics in dentistry begins with understanding the structure of hard tissues, where the foundations of visual synthesis are also explored. These foundations serve as the basis for fulfilling the requirements for restorative emulation and seamless integration of the restoration with the tooth through daily technical applications. The biomimetic approach to dental aesthetics is more universal than previous methods. Initially, color was considered in only three dimensions, which later expanded to five dimensions, and now encompasses nine elements to capture the entire visual synthesis. This approach takes into account the passage of light through a tissue with layers that have different optical characteristics. The tooth presents a unique structure, resulting in a mixture of optical effects that inevitably influence the final visual outcome.