

Fashion meets medicine on the catwalk

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ABSTRACT

The paper deals with an innovative way of creating new fabric designs based on microscopic images obtained from histology stem cell experimentations and other cellular and molecular studies. This novel technique can be used to incorporate the field of medicine into fashion.

Keywords

fashion,
fabric design,
stem cell,
histological images,
microscopic biologic samples

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Communication

I am writing to share my thoughts on a new and exciting trend that could potentially emerge in the world of fashion. It involves creating new fabric designs based on microscopic images obtained from histology stem cell experimentations and other cellular/molecular studies. I believe it has the potential to transform the industry and pave the way to a new definition of “biologic” fabrics.

The idea first crossed my path in 2019 when I received an email from an undergraduate design student from China named Zhu He (otherwise known as Irene). She was searching for medical studies online and was impressed by the colorful images in the articles I published regarding the use of human adipose-derived stem cells for the treatment of corneal disorders [1-3]. She was preparing her thesis and wanted to use the microscope images from my stem cell studies to create innovative designs on different types of fabrics, to then be used in making dresses for models in a fashion show. I sent her numerous images of histological samples from the rat and mice experiments we performed, which showed different cells and structures found in corneal and adipose-derived stem cell tissues (Fig. 1). Irene selected various images, which were then printed onto cotton, silk, and mixed fabrics (Fig. 2). She later used the fabrics to make several dresses (Fig. 2), which were successfully presented in her dissertation.

Histology slides are routinely used by researchers and pathologists to examine and assess the cellular structure of organs and tissues. Recent advancements in printing and design technology have made it possible to reproduce these fascinating images onto a variety of surfaces, including fabrics. The resulting

effects on various types of fabrics are fascinating, with rich colors and intricate unique patterns that are unlike anything else in fashion. In addition, these methods offer a unique way to integrate art, fashion, science, and medicine in a personalized, meaningful, and beautiful manner. Designs and patterns do not need to be created, but selected, stained, and prepared based on the vast choices of molecular and cellular natural works of art found in the human body. This new era in fashion design could potentially lead to the creation of personalized printed designed materials based on biochemical and cellular samples of the individual.

The use of stem cell histology slides in fashion can assist in the growing interest in regenerative medicine in healthcare. By incorporating these images into fashion, we are helping to raise awareness of the amazing potential of stem cells in treatment regimes. Some may find this trend controversial, as the use of human tissue samples for fashion may be seen as inappropriate or disrespectful. It is important to note that the tissue samples used in the creation of these prints are normally ethically sourced and obtained with legal means.

In closing, fabric designs based on stem cell slides or other molecular and cellular structures are an innovative and exciting technique that can potentially continue to gain popularity in the world of fashion. It offers a unique way to showcase the complexity and beauty of medicine and science while highlighting the benefits of regenerative medicine. Clothing made from “biologic prints” could be the next major trend to hit Paris and Milan on the catwalk.

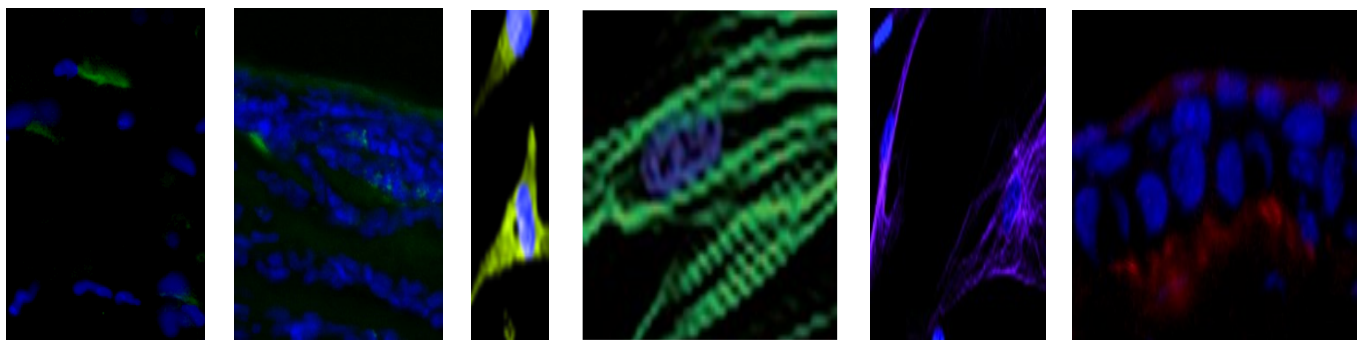


Fig. 1 Images of histologic microscope slide samples from the stem cell experiments.



Fig. 2 Fashion designs, printed cotton material, and dresses made using histologic images from stem cell experiments by Zhu He (Irene).

Author Contributions

Marco Zeppieri was the sole author and completed all elements of the paper. The author has read and agreed to the published version of the manuscript.

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Conflicts of Interest

The authors declare no conflict of interest.

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