

# Medical Writing

## Vaccines and immunotherapies

The use of vaccines and immunotherapies in medicine dates back to the end of the 18th century and the work of Edward Jenner, the father of immunology. Jenner, building on the observations of John Fewster in 1768, showed that inoculation with the cowpox virus prevented smallpox. Thus the first vaccine, the name derived from the Latin for cow, “vacca”, was developed.

Although Jenner’s discovery is thought to have saved more lives than any other scientific discovery, the use of vaccines has mostly been limited to preventing childhood disease (including measles, tetanus, diphtheria, etc.). Today, with a better understanding of the immune system, vaccines and immunotherapy provide hope for treating other diseases. Despite having developed many strategies to attack disease, we have largely ignored the power of our own immune system. Harnessing the immune system’s capacity, combined with the arsenal of therapies already developed, may allow us to advance in the war against a variety of diseases.

In this issue of *Medical Writing*, we discuss various aspects of the development of vaccines and immunotherapies. **Jonathan M. Pitt** and **Julie Harriague** open the issue with an introduction to the topic. **Jackline Odhiambo** in her article, “HIV vaccine clinical trials” discusses the number of challenges involved in developing the elusive HIV vaccine, with the potential of saving millions of lives. **Ulrike Lehnigk** in her article, “Allergen immunotherapy in the European regulatory environment”, gives an overview of allergen immunotherapies and the current regulatory constraints. In “Immuno-oncology: Harnessing our immune system to fight cancer” by **Anne Rasclé** and me, we briefly describe the mechanism by which cancer suppresses our immune response, the different immunotherapies being developed, and how clinical study design has evolved to evaluate these agents. Since vaccines and immunotherapies target the immune system and not disease, the traditional methods used to evaluate efficacy and toxicity need to be adapted. In the article, “Changing methods to assess targeted therapies in oncology”, adapted from a French article by **Bernard Asselain** and **Xavier Paoletti**, we describe the method-



**Figure 1. The Cow Pock.** In this cartoon, which suggests “the Wonderful Effects of the New Inoculation!”, cows are depicted as emerging from people’s bodies after being administered the cowpox virus.

ological and statistical changes made to evaluate targeted therapies, including immunotherapies. The use of vaccines and immunotherapies are not without safety concerns. **Justina Orleans-Lindsay** in her article, “Pharmacovigilance for vaccines and immunotherapies: What does the medical writer need to know?” gives us insight into the specific adverse events and regulatory framework in this area. Since the development of the smallpox vaccine by Jenner, vaccination has always been shrouded by controversy (Figure 1, attributed to British satirist James Gillray). **Michelle Guillemard** in her article, “Addressing vaccine hesitancy in writing” describes the importance of clarity combined with other strategies when writing about vaccines.

I hope you find this issue of *Medical Writing* interesting and that it will provide a framework for understanding the current developments in vaccines and immunotherapies, and the specific challenges involved.

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