Catch Me if You Can or Actors on the Run

What have Leonardo DiCaprio and streptococci in common? One could guess that Leonardo DiCaprio probably may have suffered from a strep throat during his childhood, but there is no reported evidence. Also, the wordplay that the famous actor had to learn how to deal with compliments while bacterial pathogens have acquired strategies to deal with complement seems to be far-fetched, though a little bit closer to the truth. In *Catch me if you can*, one of DiCaprio's most famous movies, he plays Frank Abagnale, a man with many faces, who manages to escape his imprisonment by the FBI. Like Frank Abagnale, streptococci have also evolved mechanisms to camouflage their outfit in order to run away from the innate immune police. The review article by Emert and Laabei [1], published in this issue, provides the reader with an excellent and a timely overview of the tricks employed by these bacteria to fool the immune system. Recent studies have underlined the importance of complement in eradicating invading bacteria [2] or being involved in other essential innate immune pathways such as the kallikrein/kinin system [3], making the complement system an interesting target for drug development [4]. However, as exemplified by Laabei and Emert, bacteria are often one step ahead, which makes hunting the catch a difficult undertaking. Likewise, the second review article in this issue, published by

Watson et al. [5], is dealing with innate immune recognition. However, instead of bacteria, the focus is on viral fusion proteins which can be targeted by lung collectins such as surfactant proteins A and D. Notably, collectins are mainly discussed in terms of their antibacterial activity [2, 6] or as triggers of inflammation [7]. Therefore, the article by Watson and coworkers is highlighting another very important aspect of this class of proteins, that is their ability to clear viral pathogens. Apart from collectins, the human body has developed other antiviral strategies. For instance, Xu et al. [8] show in their article that human cervical epithelial cells are able to evoke the induction of cellular HIV restriction factors that mediate HIV inhibition. This process seems to engage an involvement of the interferons IFN- β and IFN- λ s, respectively. Within the last years, *Journal of Immunity* has published many articles involving interferon signaling [9–13], emphasizing the important role of these inflammatory immune mediators in fighting viral infections. Future work will hopefully bring us the answer whether IFN- λ s can be used as therapeutic target for the treatment of HIV infection. Aside from the contribution by Xi-Qiu Xu and collaborators, four articles of the current issue investigate phagocytosing cells [14–17]. Their findings underline that the cellular innate immune response constitutes another essential defense system

against invading pathogens, being orchestrated by the complement system and activation of pattern recognition receptors [18]. Amazingly, all four articles deal with different immunological aspects telling us that there is still no redundancy when conducting research on the innate immune system. Thus, as long as the actors of the

innate immune system continue to perform and can surprise us, the *Journal of Innate Immunity* is not steering the boat towards an iceberg, as it happened in another famous Leonardo DiCaprio movie.

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