

Granzyme B: A pathological role in skin aging and age-dependent skin injury

Vancouver, British Columbia (March 8, 2021) viDA Therapeutics Inc. (viDA), a private biotechnology company, today announced publication of data in which we show Granzyme B is an important contributor to impaired healing related to aging. The article, entitled “Granzyme B mediates impaired healing of pressure injuries in aged skin”, was published in the *Nature* publication journal *Aging and Mechanisms of Disease* (<https://www.nature.com/articles/s41514-021-00059-6>)

In this peer-reviewed study, published by a team led by Dr. David Granville (Professor and Associate Dean Research, University of British Columbia, Executive Director of the Vancouver Coastal Health Research Institute and co-founder of viDA), they identified a link between Granzyme B (GzmB) and impaired healing associated with aging. Previous studies have observed that GzmB progressively accumulates in conditions associated with age and chronic inflammation, suggesting a role in inflammaging (chronic, low-grade inflammation associated with aging). Pressure injuries (aka bedsores) are common in the elderly, obese and immobilized populations. As such, pressure injuries and skin tearing are on the rise, exerting an enormous economic and health burden. In the present study, age-related elevations in GzmB in skin corresponded to impaired wound healing following pressure injury while the absence of GzmB activity resulted in improved wound remodelling and recovery.

The present results are consistent with accumulating evidence supporting the use of GzmB-targeted therapeutics for inflammatory skin conditions. Research demonstrating the use of a novel small molecule GzmB inhibitor, VTI-1002 delivered topically in a gel, protects the structural integrity of the skin, reduces inflammation and accelerates wound remodeling and recovery has previously been published in:

Nature Communications entitled “Granzyme B inhibition reduces disease severity in autoimmune blistering diseases” (<https://rdcu.be/cdq3O>);

Journal of Investigative Dermatology entitled “Granzyme B Contributes to Barrier Dysfunction in Oxazolone-induced Skin Inflammation through E-Cadherin and Filaggrin Cleavage” ([https://www.jidonline.org/article/S0022-202X\(20\)31660-2/fulltext](https://www.jidonline.org/article/S0022-202X(20)31660-2/fulltext)); and

Experimental & Molecular Medicine entitled “Topical small molecule granzyme B inhibitor improves remodeling in a murine model of impaired burn wound healing” (<https://pubmed.ncbi.nlm.nih.gov/29849046/>).

The studies show great promise for GzmB inhibition. A GzmB-blocking gel could be used as a safer, more targeted alternative for treating chronic and autoimmune skin diseases.

About viDA Therapeutics

viDA Therapeutics, Inc. (viDA), a Vancouver, Canada based privately held biotechnology company, is focused on developing first-in-class drugs targeting granzymes, a family of serine proteases that promote autoimmune and chronic diseases.

For additional information about viDA, please visit www.vidatherapeutics.com

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