

## **Tofacitinib (Xeljanz) for Treating Alopecia: Top 5 Points for Canadians**

**By Dr. Jeff Donovan**

[Craiglow BG, King BA](#). Killing Two Birds with One Stone: Oral Tofacitinib Reverses Alopecia Universalis in a Patient with Plaque Psoriasis. *Journal of Investigative Dermatology* 2014 Jun 18.

A wave of excitement arose last week with the publication of a scientific article in the *Journal of the Investigative Dermatology*. A 25 year old man with both psoriasis and alopecia universalis was treated with the arthritis drug tofacitinib (also called Xeljanz). Within 8 months of treatment the man had grown hair.

This is a time to be excited because every new piece of information pushes us that much closer to understanding the best treatment for alopecia areata. However, as a physician and medical advisor to CaNAAF, I also want to ensure that my patients and the general public receive accurate information.

The following are the top 5 points everyone should know about this new study and the drug.

**Point 1. Tofacitinib (also called “Xeljanz”) is a relatively new drug approved for rheumatoid arthritis.** It's FDA approved for patients with moderate to severe rheumatoid arthritis. The drug works by blocking an enzyme called the Janus kinase (type 1/3). We have not used drugs before for treating alopecia areata that specifically blocked this ‘molecular pathway’ inside cells so this is exciting!

**Point 2. Tofacitinib is an immunosuppressant medication.** We already use many different types of immunosuppressant medications for the treatment of alopecia areata. Four examples include oral prednisone, methotrexate, cyclosporine and sulfasalazine. Do these four drugs work to promote hair growth in some patients with alopecia areata, alopecia totalis and alopecia universalis? Yes! Is tofacitinib better? We don't know that answer.

It's important for everyone to remember that the drug tofacitinib is formally approved for patients with arthritis who don't get better with methotrexate. Tofacitinib is not formally approved for alopecia areata. Should tofacitinib be considered only after someone with alopecia has tried other treatments? At the present time, the answer is yes. Given that tofacitinib is not approved for alopecia areata and results of only one patient have been made public, other treatments should most definitely be considered first.

**Point 3. Tofacitinib is one of many medications that may have helped the man in the study.** It's important to be aware that the 25 year old man in the study was previously treated only with topical steroids before being given tofacitinib. He didn't receive any other treatment. We don't know whether other alopecia treatments such as topical diphencyprone, topical anthralin, methotrexate, cyclosporine and sulfasalazine would have promoted similar growth. I truly suspect some of these treatments would have also given him hair growth.

**Point 4. Tofacitinib is a treatment, not a cure.** It's important for everyone to keep in mind that tofacitinib is a potential treatment for alopecia but not a cure. In order for this man to keep his hair, he will need to remain on the medication. We don't know if he will lose his hair in the months ahead even if he stays on the medication. I suspect that if he stops the medication he will lose his hair.

**Point 5. Tofacitinib needs to be respected.** Tofacitinib has potential side effects and should only be prescribed by a physician who is very knowledgeable about the drug and should only be used by patients who are very knowledgeable about the potential side effects. As an immunosuppressant, the drug can increase the risk of infection. In fact, serious infections occur in approximately 2 % of patients. Long term risk for cancer also needs to be considered. The drug can reduce heart rate by approximately 5 beats per minutes and sometimes can't be used in patients with heart problems. Frequent blood monitoring is needed while on the drug as the drug can irritate the liver, sometimes lower blood counts and sometimes raise cholesterol levels.

## **Final Comments**

New pieces of information push us that much closer to understanding the cause and optimal treatment for alopecia areata. The drug tofacitinib may be helpful for patients with alopecia areata, alopecia totalis and alopecia universalis, but more studies are needed. All physicians prescribing the drug and all patients who wish to consider the drug need to be aware of the short term and long term risks.