Chapter 5: General Conclusion

GENERAL CONCLUSION

The effect of quinolones on the immune system has been mainly studied *in vitro*. Despite some conflicting results due to variation in study methodologies, certain conclusions can be drawn. Clinically relevant concentrations of most of quinolones seem to have no direct effect on isolated immune parameters, such as phagocytic cell functions, lymphocyte proliferation immunoglobulin production, cytokine production and bone marrow progenitor cell proliferation. *In vivo* studies are few, and are generally in agreement with the *in vitro* findings. Only high doses administered to experimental animals caused suppressive effects, while therapeutic doses are usually not associated with measurable alterations in immune functions. Secondary anti-inflammatory properties would be clinically useful for treating acute lung injury and many chronic lung diseases.

Therefore, I conclude that moxifloxacin at therapeutically relevant concentrations does not have any direct effects, either inhibitory or stimulatory, on human leukocytes (neutrophils and lymphocytes) functions *in vitro*, but rather interacts directly with target bacteria rendering them more vulnerable to eradication by leucocytes.

Chapter 6: References

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