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#### **ACCEPTED MANUSCRIPT**

# ETS transcription factor Etsrp / Etv2 is required for lymphangiogenesis and directly regulates *vegfr3 / flt4* expression

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#### **ABSTRACT**

The molecular mechanisms initiating the formation of the lymphatic system, lymphangiogenesis, are still poorly understood. Here we have identified a novel role in lymphangiogenesis for an ETS transcription factor, Etv2/Etsrp, a known regulator of embryonic vascular development. Through the use of fully validated photoactivatable morpholinos we show that inducible Etv2 inhibition in zebrafish embryos at 1 day post-fertilization (dpf) results in significant inhibition of lymphangiogenesis, while development of blood vessels is unaffected. In

<sup>&</sup>lt;sup>1</sup> Authors made equal contributions to this study

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