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## JOURNAL ARTICLE

# Chloride efflux during the progesterone-initiated human sperm acrosome reaction is inhibited by lavendustin A, a tyrosine kinase inhibitor

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Previous studies showed that progesterone (P) can initiate the mammalian sperm acrosome reaction (AR) in vitro and that a sperm GABAA-like receptor/Cl<sup>-</sup> channel is involved in an essential Cl<sup>-</sup> efflux mediated by P during the AR. Here, we show that lavendustin A, a potent, specific inhibitor of tyrosine kinase activity, strongly inhibits the P-initiated human AR and the essential P-mediated Cl<sup>-</sup> efflux. Lavendustin B, a weak tyrosine kinase inhibitor, had no significant effect. These results suggest that, as part of AR initiation, P mediates tyrosine phosphorylation of the sperm GABAA-like receptor/Cl<sup>-</sup> channel.

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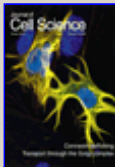
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