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## Effects of B cells activating factor on growth characteristics of mouse renal tubular epithelial cells

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**Backgrounds**: We previously found that BAFF and BAFF-R highly expressed on renal tubular epithelial cells (RTECs) in kidney allograft rejection tissues, but the significance of abnormal expression is still to be further investigated.

**Methodology**: Primary mouse RTECs (from 4-6 w C57BL/6) were isolated by enzyme digestion method, and cultured in the conditioned medium. After stimulated by 500U/mL IFN- $\gamma$  for 48h, the expression of BAFF and BAFF-R on RTECs were detected by FCM. After treated with recombinant mouse BAFF and/or blockade BAFF-R-Fc fusion protein for 48h, the transport ability of fluorescein sodium and CK-18 expression of RTECs were detected, respectively; Proliferation ability and apoptosis rates of RTECs were tested by MTS and FCM method, respectively; Data were analyzed by SPSS17.0, and P < 0.05 was considered to be statistically significant.

**Results**: BAFF-R expression on RTECs in the IFN-γ treated group significantly up-regulated, compared with control group. Fluorescein sodium transport ability and CK-18 expression of BAFF stimulation group was significantly lower than that of BAFF-R-Fc+BAFF group and control group, respectively; Cell proliferation ability of 5ng/mL and 20ng/mL BAFF group were significantly higher than that of control group and BAFF-R-Fc+BAFF group; While apoptosis rate of BAFF-treated group was significantly lower than that of BAFF-R-Fc+BAFF group and control group.

**Conclusion & Significance:** BAFF/BAFF-R signaling could promote the proliferation ability of RTECs, but down-regulate the epithelial cell characteristics and Ionic transport ability of RTECs. And it is worth exploring whether enhancement of BAFF/BAFF-R signaling promotes the interstitial transformation of RTECs.

## Biography

Haiyan Xu has devoted herself on relative study of kidney transplantation, including rejection, opportunistic viral infection and induction of immune tolerance, since she got PHD. Taking B cell activating factor (BAFF) as the research breakthrough point, she found BAFF signaling system involve in the progression of renal allograft rejection and blockade of BAFF signaling should become the potential anti-rejection options; BAFF signaling crosstalk with HCMV/TLR9 in renal transplant recipients, which would decrease the long-term outcome of renal allograft, and mouse DC induced by liver X receptor agonist show immunosuppressive effect, which differ from natural tolerance DC

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