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Ibuprofen Inhibits Overexpression of Tumor-Related RAC1B through SRSF1

Vânia Gonçalves

3rd International Caparica Conference in Splicing 2020
13th – 16th July 2020



FUNDAÇÃO
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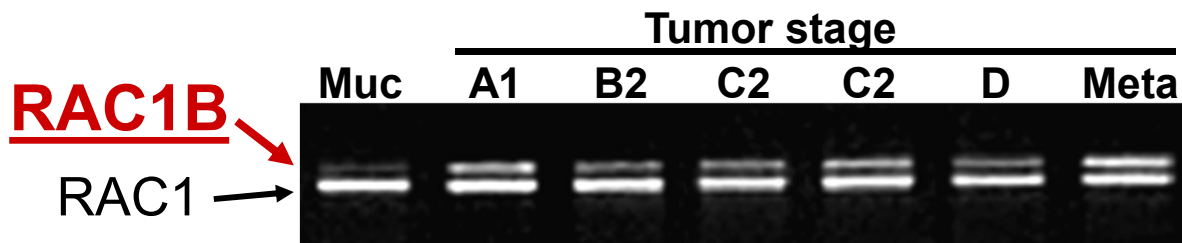
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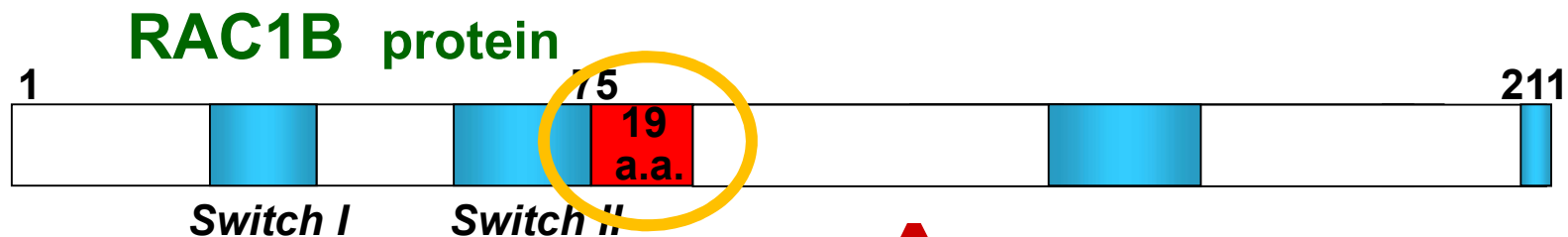


Alternative splicing and cancer

Example: *RAC1* expression in colorectal cancer



Jordan (1999) Oncogene 18:6835-39

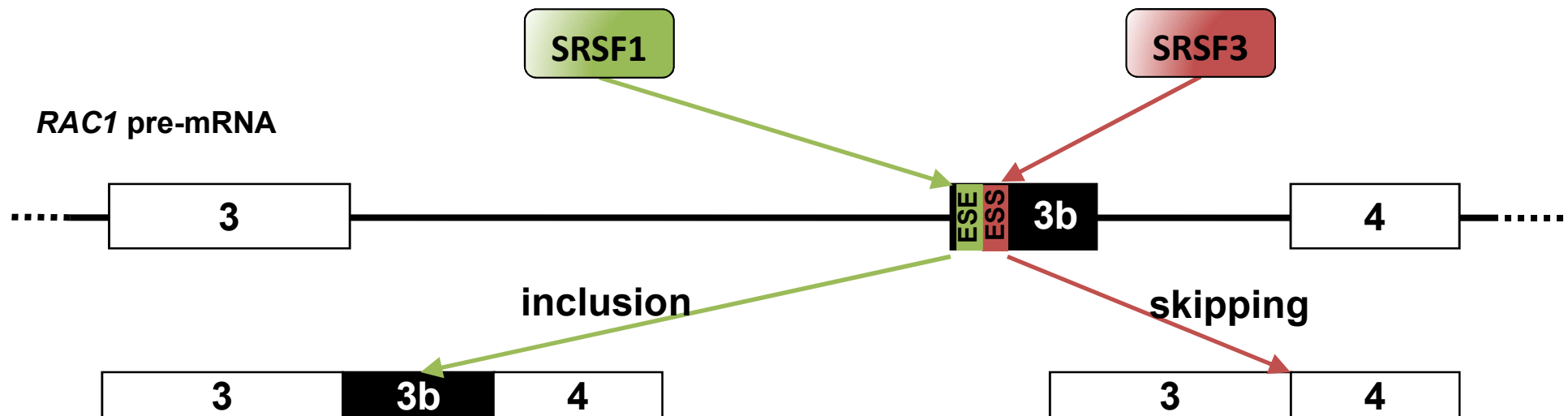


→ **RAC1 alternative splicing**

Matos (2000) BBRC 277:741-51

Model for regulation of *RAC1* alternative splicing in CRC

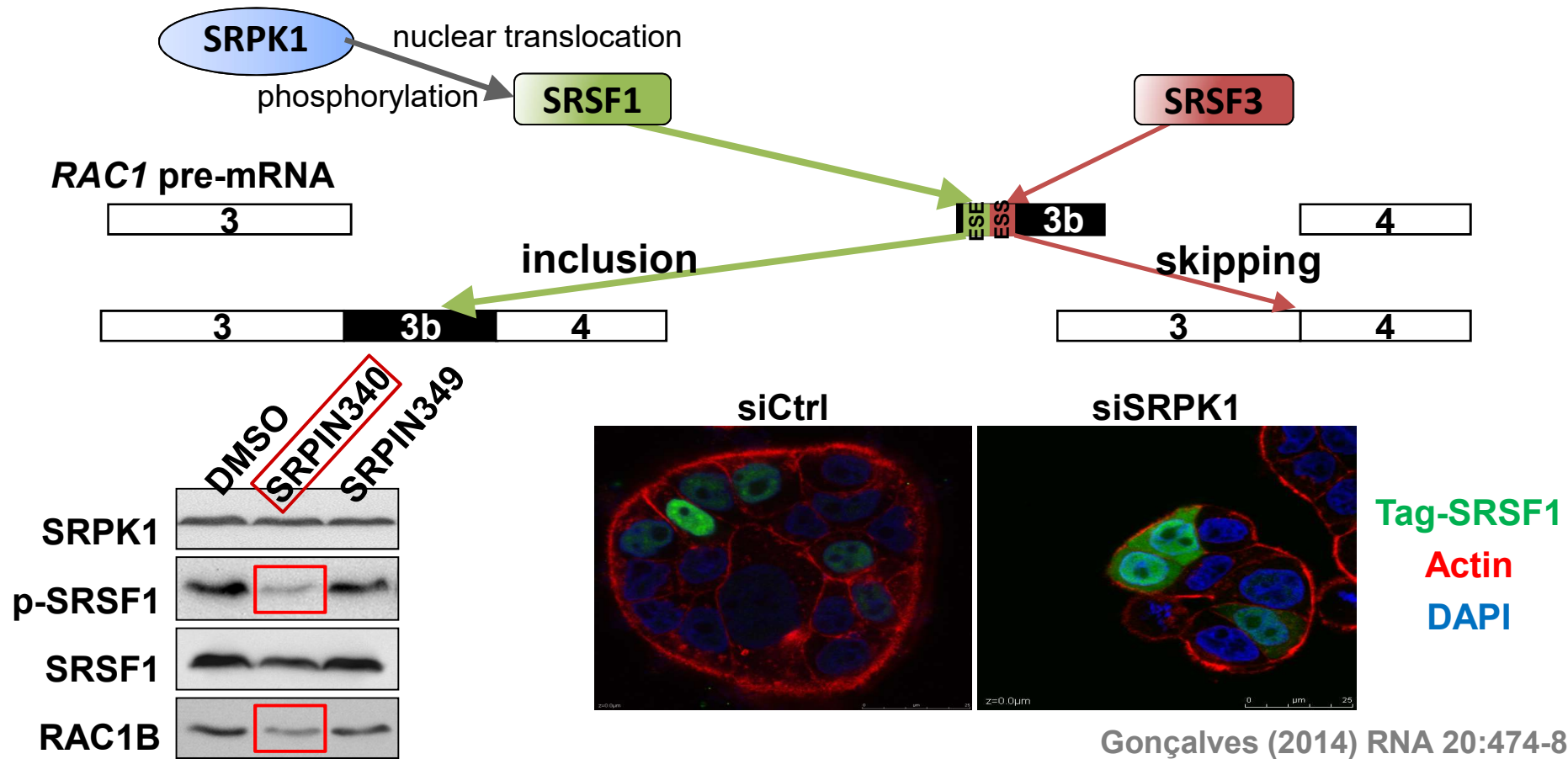
Which signaling pathways regulate binding of SRSF1 and SRSF3?



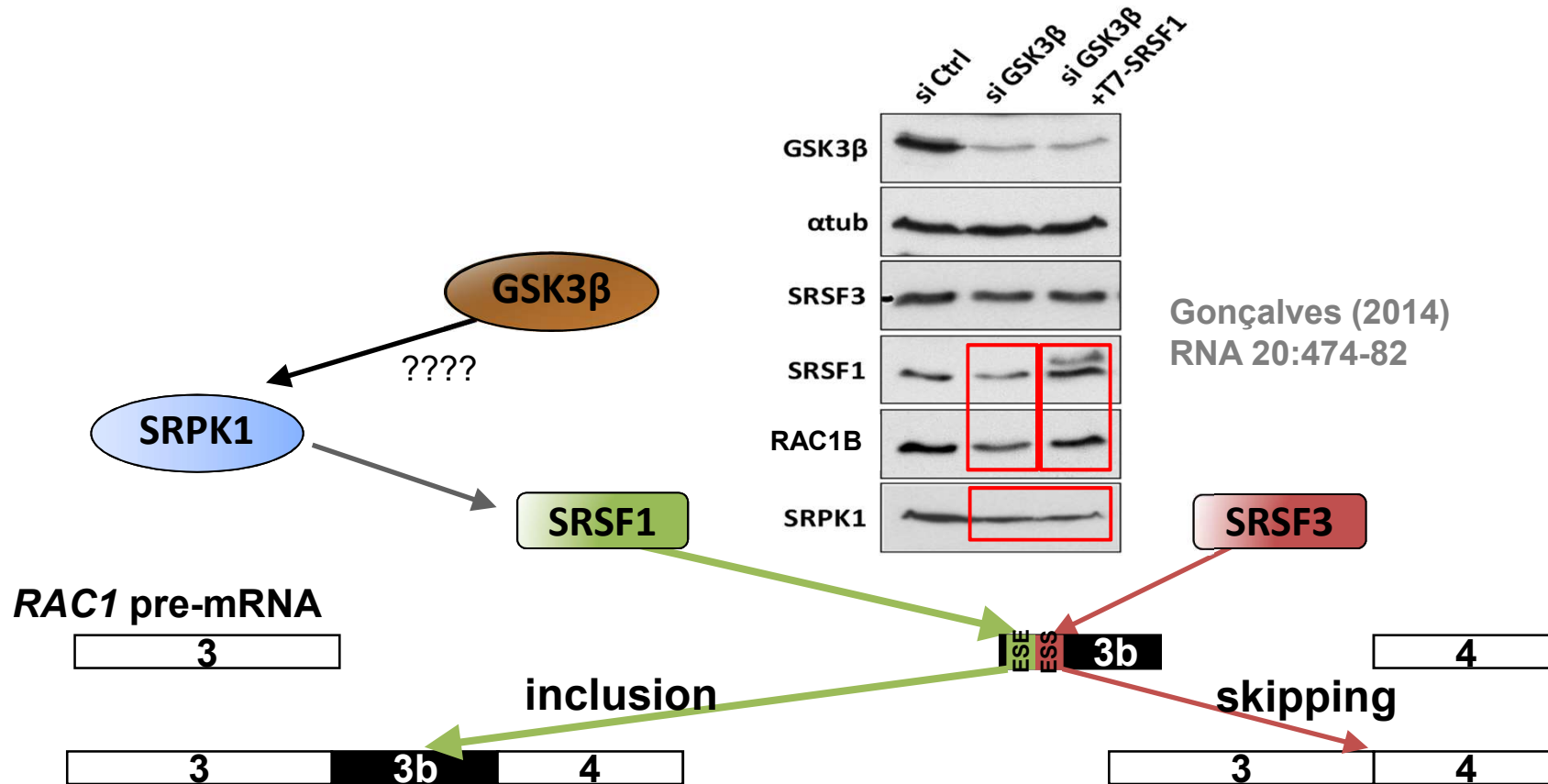
➤ **SRSF1** promote the recognition of exon-3b of the *RAC1* gene

➤ **SRSF3** inhibit the recognition of exon-3b of the *RAC1* gene

Role of protein kinase SRPK1 in RAC1B splicing



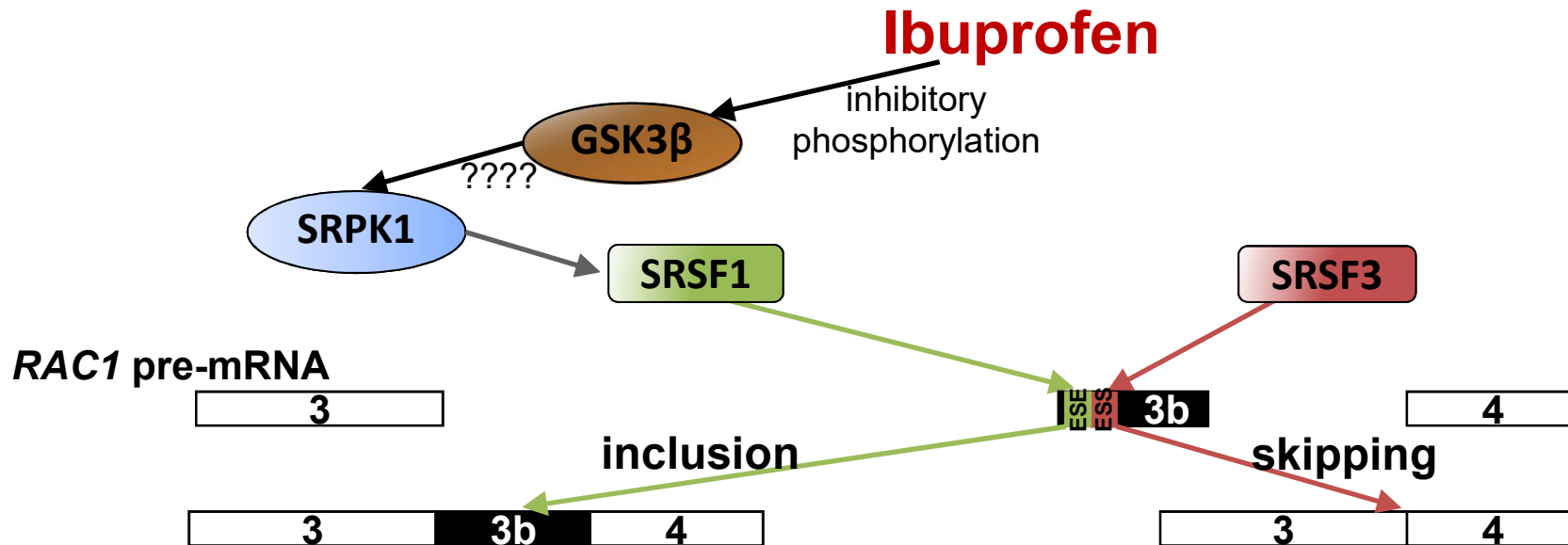
Role of protein kinase GSK3 β in RAC1B splicing



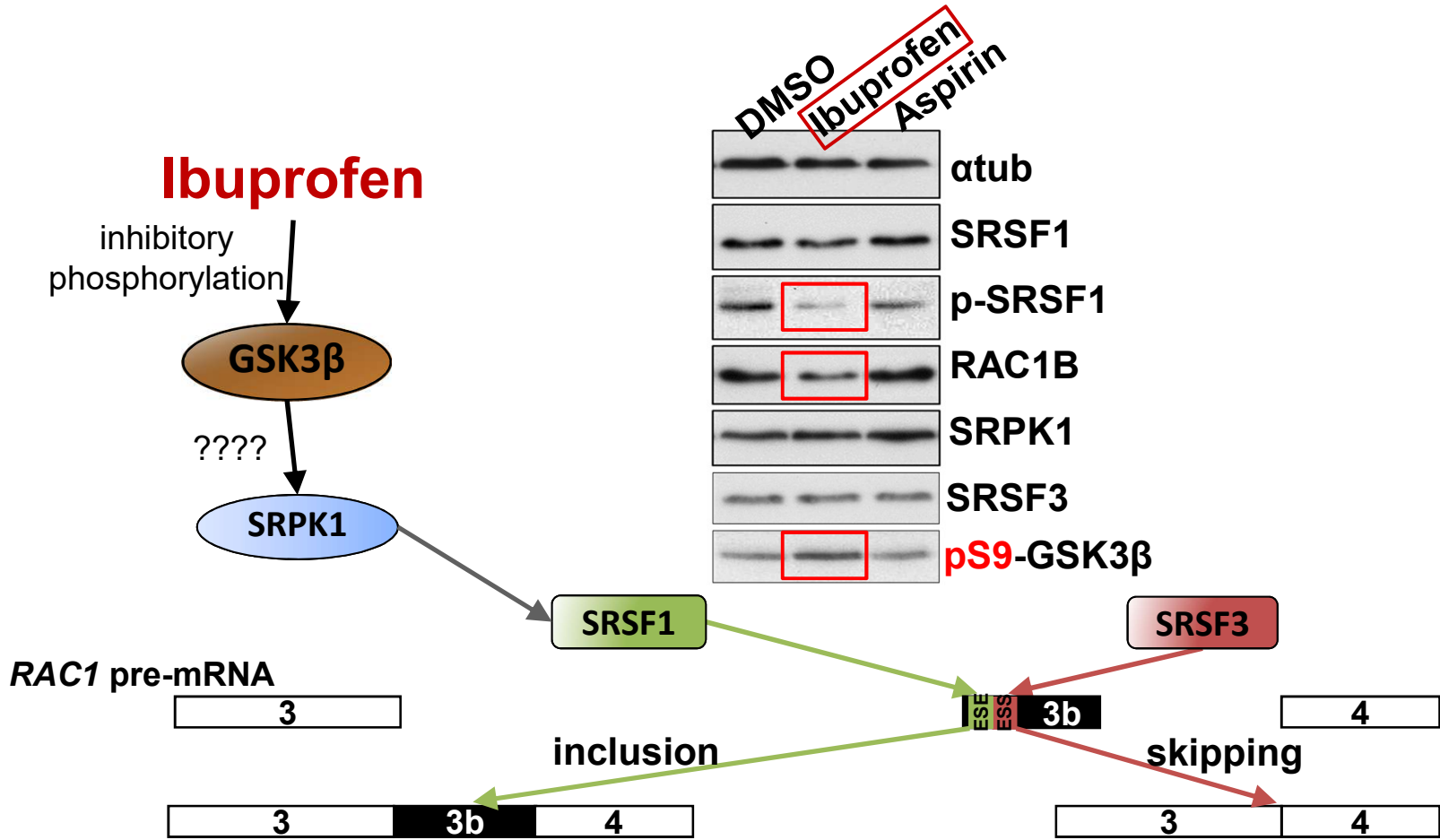
Signaling pathways regulating RAC1B splicing

Ibuprofen Inhibits Colitis-Induced Overexpression of Tumor-Related Rac1b¹

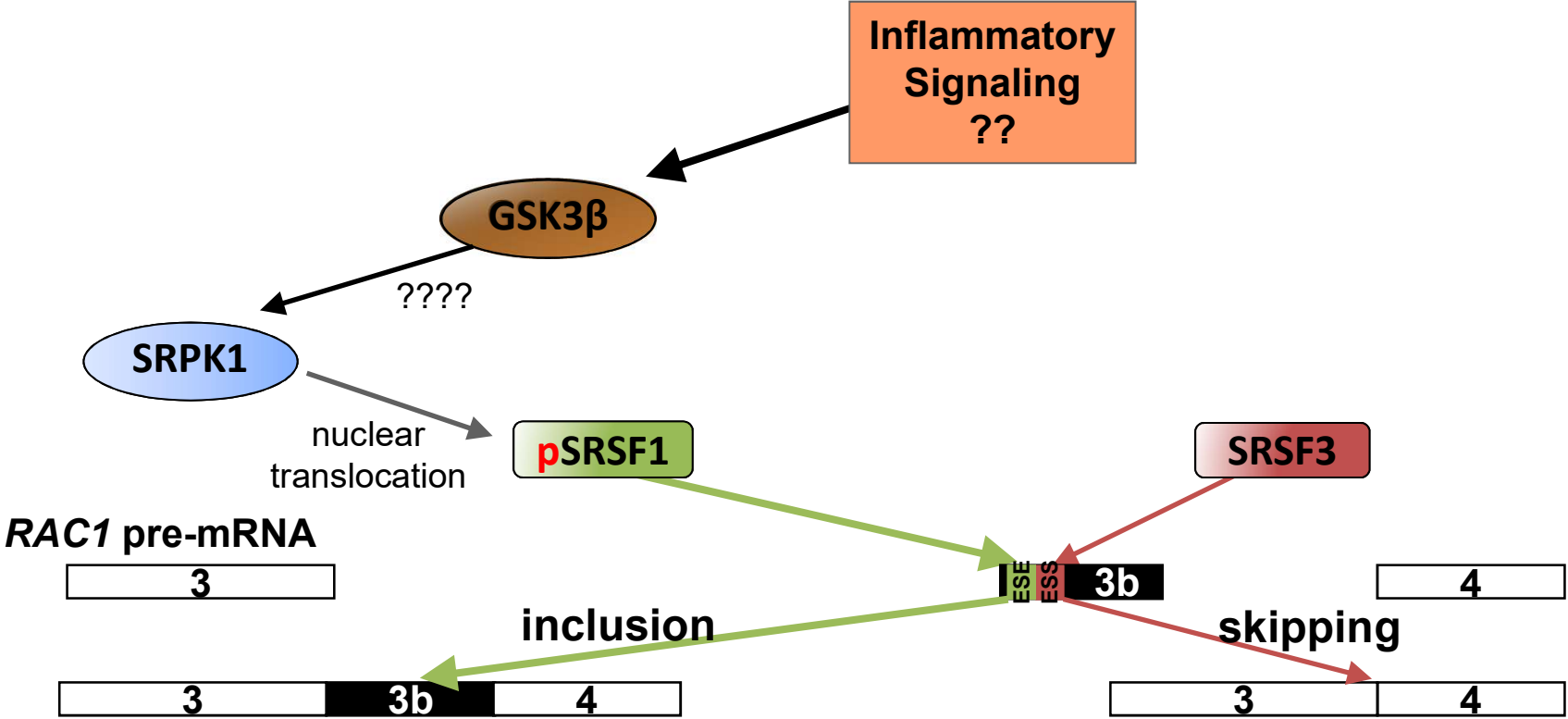
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Vânia Gonçalves^{*}, Andreia Henriques^{*},
Philippe Zerbib[§], Mary Pat Moyer[†], Eric Chastre^{†,‡}
and Peter Jordan^{*}



Signaling pathways regulating RAC1B splicing

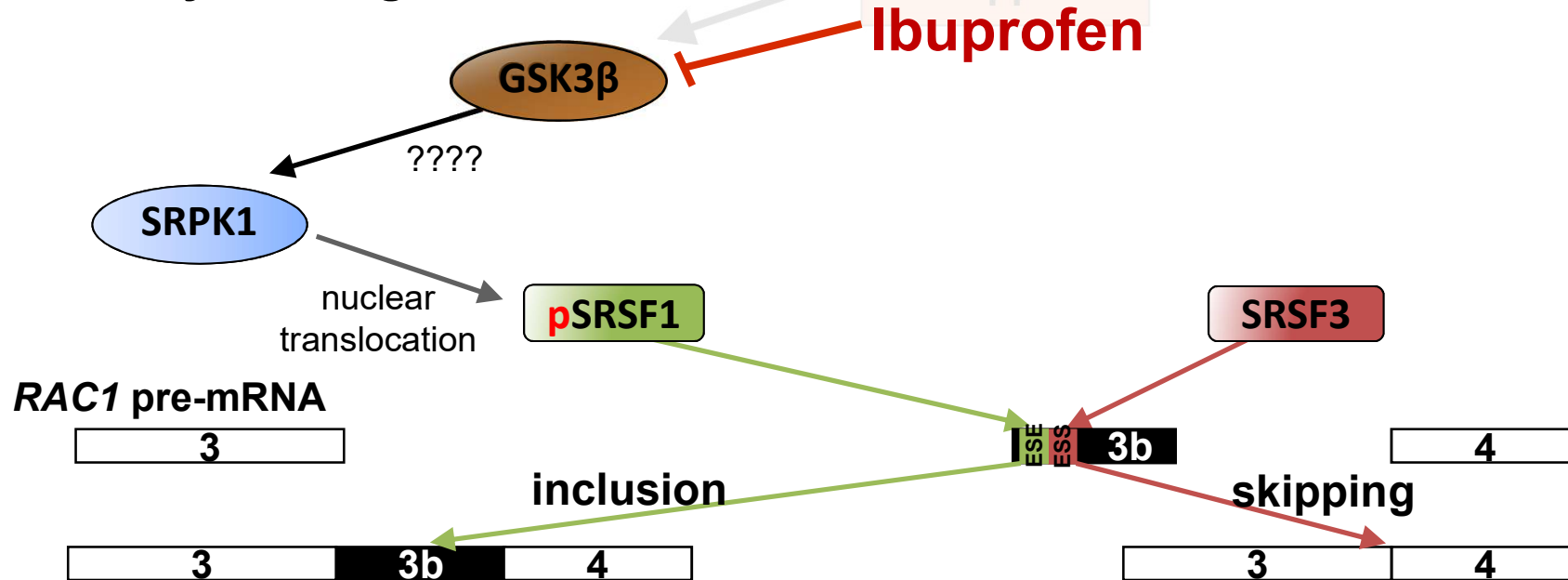


Signaling pathways regulating RAC1B splicing



Final remarks

- oncogenic signal transduction pathways deregulate alternative splicing
- this may be drug revertable



Acknowledgments

- Peter Jordan
- Paulo Matos
- Patrícia Barros
- Andreia Henriques
- Joana Pereira
- Cláudia Bessa
- Ana Matos
- Márcia Faria

Funding support:



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