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**Manuscript NO:** 48781

**Manuscript Type:** REVIEW

**Role of ion channels in gastrointestinal cancer**

Anderson KJ *et al.* Ion channels in GI cancer

Kyle J Anderson, Robert T Cormier, Patricia M Scott

**Abstract**

In their seminal papers Hanahan and Weinberg described oncogenic processes a normal cell undergoes to be transformed into a cancer cell. The functions of ion

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<https://www.sciencedirect.com/science/article/pii/S1471489203001322>

The main focus of this article is the process of **sensitization** of GI **nociceptive** pathways. We have addressed the **role** of **voltage-gated ion channels** in the triggering and maintenance of sensitization of GI **sensory** afferents, which is likely to be exerted mainly through control of action potential generation.

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<https://molecular-cancer.biomedcentral.com/articles/10.1186/s12943-017-0622-y> ▾

Mar 06, 2017 · **Dysregulation** and/or malfunction of ion channels or **aquaporins (AQPs)** are common in various human **cancers**. Furthermore, ion channels are involved in numerous important aspects of the **tumor** aggressive phenotype, such as proliferation, **cell cycle**, **apoptosis**, **motility**...

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## Frontiers | The role of ion channels and transporters in ...

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Oct 29, 2013 · **Leanza et al.** (2013) provide an updated overview of the **role** of ion channels in



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## Role of ion channels in regulating Ca<sup>2+</sup> homeostasis during ...

<https://www.nature.com/articles/cddis201523>

Feb 19, 2015 · Thus, **ion channels** are involved in migration, which plays a major **role** in the initiation of metastasis process. 75 As an example, BK Ca and SK Ca **channels** are implicated in ...

**Cited by:** 29

**Author:** Tanima Bose, Artur Cieślak-Pobuda, Emili...

**Publish Year:** 2015

## The roles of K<sup>+</sup> channels in cancer | Nature Reviews Cancer

<https://www.nature.com/articles/nrc3635>

Dec 12, 2013 · Hoffmann, E. K. **Ion channels** involved in **cell** volume regulation: effects on migration, proliferation, and programmed **cell death** in non adherent EAT cells and adherent ELA cells.

**Cited by:** 243

**Author:** Luis A. Pardo, Walter Stühmer

**Publish Year:** 2014

**Author:** Luis A. Pardo, Walter Stühmer

## Role of TRP ion channels in cancer and tumorigenesis ...

<https://link.springer.com/article/10.1007/s00281-015-0525-1> ▾

**Transient receptor potential (TRP)** channels are recently identified proteins that form a versatile family of ion channels, the majority of which are calcium permeable and exhibit complex regulatory...

**Cited by:** 24

**Author:** George Shapovalov, Abigael Ritaine, Ro...

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**Cited by:** 83

**Author:** Florian Lang, Christos Stournaras, Christos ...

**Publish Year:** 2014

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Mar 12, 2019 · **Transient Receptor Potential Melastatin-2 (TRPM2) ion channel** is emerging as a great therapeutic target in many types of cancer, including **gastric cancer** – a major health threat of cancer ...

**Cited by:** 3

**Author:** Shekoufeh Almasi, Andra M. Sterea, Wasun...

**Publish Year:** 2019

**Author:** Shekoufeh Almasi

### Ion Channels and Cancer | SpringerLink

<https://link.springer.com/article/10.1007/s00232-005-0781-4> ▾

**Membrane ion channels** are essential for **cell proliferation** and appear to have a **role** in the development of **cancer**. This has initially been demonstrated for **potassium channels** and is meanwhile also suggested for other **cation channels** and **Cl<sup>-</sup> channels**.

**Cited by:** 494

**Author:** Karl Kunzelmann

**Publish Year:** 2005

### Role of transient receptor potential melastatin type 7 ...

<https://www.sciencedirect.com/science/article/pii/S2213422016300294>

**Ion channels** play **important roles** in a variety of biological processes and diseases, and of these, a number of **Ca<sup>2+</sup> channels** have been linked with **cancer cell behaviors** and with the pathophysiological