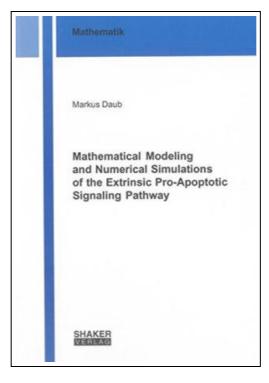
Mathematical Modeling and Numerical Simulations of the Extrinsic Pro-Apoptotic Signaling Pathway



Filesize: 3.36 MB

Reviews

Complete guideline for publication fans. I am quite late in start reading this one, but better then never. It is extremely difficult to leave it before concluding, once you begin to read the book.

(Llewellyn Terry)

MATHEMATICAL MODELING AND NUMERICAL SIMULATIONS OF THE EXTRINSIC PROAPOPTOTIC SIGNALING PATHWAY



Shaker Verlag Mrz 2013, 2013. Buch. Condition: Neu. Neuware - Apoptosis is a special form of programmed cell death and plays an important role in cancer research for instance. An essential part of the apoptotic process is the extrinsic signaling pathway, which is initiated at the cellular membrane by active ligand-receptor clusters. The activation of special proteins, so-called caspases, starts a caspase cascade, a reaction network of diverse caspase types, that finally results in the death of the cell. The extrinsic signaling pathway can simply be separated into two components: on the one hand, the formation of ligand-receptor clusters on the cellular membrane which act as stimulus of the signaling pathway, and on the other hand, the intracellular reaction network where diverse caspase types are involved in. In this thesis, mathematical models for these two processes are introduced and analyzed. According to the structure of the signaling pathway, the thesis is separated into two parts. 1) In the first part of the thesis, we introduce a spatially extended reaction-diffusion model for the reaction network with diverse caspase types. First, we show that the system has an unstable and two asymptotically stable, spatially homogeneous, stationary solutions. Moreover, we prove that the reaction-diffusion system admits a bounded invariant region that guarantees the boundedness of the solution for all time. After the analytic part of the first chapter, we proceed with a numerical analysis of the reaction-diffusion system. The numerical simulation shows that the diffusion rapidly balances the caspase concentration and that the behavior of the system is subsequently described by the reaction kinetics. We use this fact for the investigation of the long-time behavior of the reaction-diffusion with the outputs...

Read Mathematical Modeling and Numerical Simulations of the Extrinsic Pro-Apoptotic Signaling Pathway

Download PDF Mathematical Modeling and Numerical Simulations of the Extrinsic Pro-Apoptotic Signaling Pathway

See Also



Read Write Inc. Phonics: Green Set 1 Non-Fiction 2 We Can All Swim!

Oxford University Press, United Kingdom, 2016. Paperback. Book Condition: New. 217 x 115 mm. Language: N/A. Brand New Book. These decodable non-fiction books provide structured practice for children learning to read. Each set of books...

Read eBook »



Cheesie Mack Is Running Like Crazy!

 $Random\ House\ USA\ Inc,\ United\ States,\ 2014.\ Paperback.\ Book\ Condition:\ New.\ Douglas\ Holgate\ (illustrator).\ Reprint.\ 190\times135\ mm.\ Language:\ English\ .\ Brand\ New\ Book\ .\ Readers\ of\ Diary\ of\ a\ Wimpy\ Kid\ will\ love\ Cheesie...$

Read eBook »



Baby Tips for New Moms Vol 1 First 4 Months by Jeanne Murphy 1998 Paperback

Book Condition: Brand New. Book Condition: Brand New.

Read eBook »



Index to the Classified Subject Catalogue of the Buffalo Library; The Whole System Being Adopted from the Classification and Subject Index of Mr. Melvil Dewey, with Some Modifications .

Rarebooksclub.com, United States, 2013. Paperback. Book Condition: New. 246 x 189 mm. Language: English. Brand New Book
***** Print on Demand *****. This historic book may have numerous typos and missing text. Purchasers can usually...

Read eBook »



The World is the Home of Love and Death

Metropolitan Books. Hardcover. Book Condition: New. 0805055134 Never Read-12+ year old Hardcover book with dust jacket-may have light shelf or handling wear-has a price sticker or price written inside front or back cover-publishers mark-Good Copy-...

Read eBook »



How Your Baby Is Born by Amy B Tuteur 1994 Paperback

Book Condition: Brand New. Book Condition: Brand New.

Save Document »



Slave Girl - Return to Hell, Ordinary British Girls are Being Sold into Sex Slavery; I Escaped, But Now I'm Going Back to Help Free Them. This is My True Story.

John Blake Publishing Ltd, 2013. Paperback. Book Condition: New. Brand new book. DAILY dispatch from our warehouse in Sussex, all international orders sent Airmail. We're happy to offer significant POSTAGE DISCOUNTS for MULTIPLE ITEM orders.

Save Document »



Two Treatises: The Pearle of the Gospell, and the Pilgrims Profession to Which Is Added a Glasse for Gentlewomen to Dresse Themselues By. by Thomas Taylor Preacher of Gods Word to the Towne of Reding. (1625)

Proquest, Eebo Editions, United States, 2010. Paperback. Book Condition: New. 246 x 189 mm. Language: English Brand New Book ***** Print on Demand ******. EARLY HISTORY OF RELIGION. Imagine holding history in your hands. Now you

Save Document x



Kid Toc: Where Learning from Kids Is Fun!

Createspace, United States, 2012. Paperback. Book Condition: New. Hanne Simone Larsen (illustrator). 254 x 203 mm. Language: English . Brand New Book ***** Print on Demand *****. Where learning to read from kids is fun!

Save Document »



Heaven is for Real for Little Ones

Thomas Nelson. Hardcover. Book Condition: New. Board book. 26 pages. Dimensions: 7.1in. x 5.3in. x 0.7in. Heaven is for real, and you are going to like it! Colton Burpo came back from his trip to heaven

Save Document »