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Recent findings on the impact of ErbB receptors status on prognosis and therapy of head and neck squamous cell carcinoma

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Head and neck squamous cell carcinoma (HNSCC) is the sixth most common cancer type, has often an aggressive course and is poorly responsive to current therapeutic approaches, so that 5-year survival rates for patients diagnosed with advanced disease is lower than 50%. The Epidermal Growth Factor Receptor (EGFR) has emerged as an established oncogene in HNSCC. Indeed, although HNSCCs are a heterogeneous group of cancers which differ for histological, molecular and clinical features, EGFR is overexpressed or mutated in a percentage of cases up to about 90%. Moreover, aberrant expression of the other members of the ErbB receptor family, ErbB2, ErbB3 and ErbB4, has also been reported in variable proportions of HNSCCs. Therefore, an increased expression/activity of one or multiple ErbB receptors is found in the vast majority of patients with HNSCC. While aberrant ErbB signaling has long been known to play a critical role in tumor growth, angiogenesis, invasion, metastatization and resistance to therapy, more recent evidence has revealed its impact on other features of cancer cells' biology, such as the ability to evade antitumor immunity. In this paper we will review recent findings on how ErbB receptors expression and activity, including that associated with non-canonical signaling mechanisms, impacts on prognosis and therapy of HNSCC.

KEYWORDS

head and neck squamous cell carcinoma, EGFR, ErbB receptors, Cetuximab, immune checkpoint inhibitors

1. Introduction

Head and neck (HN) cancers include a heterogeneous group of cancers which differ for histological, molecular and clinical features (1–3). More than 90% of HN cancers are squamous cell carcinomas (HNSCCs) arising from the mucosal epithelium of the oral cavity, pharynx and larynx, while much less common HN subtypes originate from the salivary glands, sinuses, muscles or nerves in the head and neck¹ (2–4).

¹ <https://www.cancer.gov/types/head-and-neck/head-neck-fact-sheet#:~:q=hncc>

Receptors Recent Findings

Jessica J Manson



Receptors Recent Findings:

Recent Advances in Cellular and Molecular Aspects of Angiotensin Receptors Mohan K. Raizada, M. Ian Phillips, Colin Sumners, 2013-06-29 Scientific advances over the past two decades have afforded unprecedented opportunities to understand the structure and function of receptors receptor ligand interactions and receptor signaling The extent of progress in this area is underscored by the recent Nobel Prize for Medicine and Physiology to Alfred Gilman and Martin Rodbell both of whose work in understanding receptor/G protein interactions has redefined the way in which we think of how hormones and neurochemicals exert their activity on cellular function This book is replete with examples of current research approaches to help us better understand the cellular roles in which the renin angiotensin system and the angiotensin receptors participate Clearly defining the structure of angiotensin receptor subtypes is an important first step in clarifying the mechanisms by which these receptors take part in cellular function However the chapters within this book range far beyond structural studies and encompass research on tissue specific expression of the angiotensin receptor subtypes the genetic regulation of these receptors and the unique function of various angiotensin subtypes in different organ systems such as the brain the reproductive system adipose tissue the heart and the kidneys [Cell Surface Receptors—Advances in Research and Application: 2013 Edition](#), 2013-06-21 Cell Surface Receptors Advances in Research and Application 2013 Edition is a ScholarlyEditions book that delivers timely authoritative and comprehensive information about Neuropilins The editors have built Cell Surface Receptors Advances in Research and Application 2013 Edition on the vast information databases of ScholarlyNews You can expect the information about Neuropilins in this book to be deeper than what you can access anywhere else as well as consistently reliable authoritative informed and relevant The content of Cell Surface Receptors Advances in Research and Application 2013 Edition has been produced by the world's leading scientists engineers analysts research institutions and companies All of the content is from peer reviewed sources and all of it is written assembled and edited by the editors at ScholarlyEditions and available exclusively from us You now have a source you can cite with authority confidence and credibility More information is available at <http://www.ScholarlyEditions.com> **Recent Advances in Psychiatry from Psycho-Neuro-Immunology Research: Autoimmunencephalitis, Autoimmune-Encephalopathy, Mild Encephalitis** Karl Bechter, David Brown, Souhel Najjar, 2019-08-12 Growing evidence derived from cerebrospinal fluid CSF neuropathological imaging genetic and epidemiological studies link neuroinflammation and immune dysregulation to a subset of individuals with a variety of severe mental disorders SMDs including affective and non affective psychotic disorders Further the recent discoveries of neuronal surface antibodies NSAs in autoimmune encephalitis AE presenting with diverse neuropsychiatric disorders such as psychosis and cognitive decline among many others provides further support to the notion that CNS autoimmunity and neuroinflammation can contribute to the neurobiology of psychiatric disturbances Further these immune mechanisms may contribute to a subset of patients currently

diagnosed as having treatment resistant SMDs such as schizophrenia and major depressive disorder. Additionally, mounting data indicate that various infections can serve as an immunological trigger of aberrant immune responses, presumably by causing release of excess neural antigen, thereby giving rise to NSAs or aberrant immune cellular responses to give rise to primary or secondary psychiatric disorders such as schizophrenia and those associated with AE, respectively. Collectively, these findings support the mild encephalitis hypothesis of SMD. The significant overlap among AE-associated psychosis, systemic autoimmune disorder-associated psychosis, and psychotic disorders associated with pathological processes involving inflammation and immune dysregulation has also prompted some authors to adopt the term autoimmune psychosis (AP). This term reflects that this psychosis subtype is mechanistically linked to complex neuroimmune and inflammatory signalling abnormalities that can be responsive to early immunomodulatory treatment. It also suggests that a subset of AP might represent an incomplete or forme fruste subtype of AE presenting with dominant or pure psychiatric symptoms mimicking primary psychiatric illnesses. Because data indicate that delayed diagnosis and treatment may lead to permanent sequelae, early recognition of AP utilizing neurodiagnostic workup (e.g., CSF analysis, neuroimaging, and EEG) and its early treatment with appropriate immunotherapy are paramount to a meaningful recovery. This eBook will provide an overview of the current knowledge and research areas from epidemiology, risk factors, and diagnosis to the management of these conditions in this rapidly emerging field, helping to bridge the gaps in knowledge that currently exist in the disciplines of Psychiatry, Neurology, and Neuroimmunology.

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mGLU Receptors Richard Teke Ngomba, Giuseppe Di Giovanni, Giuseppe Battaglia, Ferdinando Nicoletti, 2017-08-22 Metabotropic glutamate receptors mGluRs are members of the group C family of G protein coupled receptors Eight different mGlu subtypes have been identified and classified into three groups based on amino acid sequence similarity agonist pharmacology and the signal transduction pathways to which they couple They perform a variety of functions in the central and peripheral nervous systems being involved in learning memory anxiety and the perception of pain They are found in pre and postsynaptic neurons in synapses of the hippocampus cerebellum and cerebral cortex as well as other parts of the brain and peripheral tissues This volume will focus on the latest research in the role of Group I mGluRs in health and disease

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The Medical Basis of Psychiatry S. Hossein Fatemi, Paula J. Clayton, 2016-03-17 Four years have passed since the last edition 3rd of this book was published In the intervening years several reviews of this book have provided highly encouraging remarks about the value of this book in transmitting information on classification and treatment of psychiatric disorders to the audience We are proposing to revise all chapters with an eye on accuracy and ease of use and this is an especially timely endeavor with the upcoming publication of the Diagnostic and Statistical Manual V All the appropriate new information on biology etiology diagnosis and treatment of psychiatric disorders will be added to the current proposed edition It is our goal to recruit the same authors if possible who contributed to the previous edition While all chapters will be updated see TOC those marked by asterisks will be the most likely to undergo more revision Psychiatry has emerged as a burgeoning scientific field with major advances in etiology and treatment of several disorders Just as there was excitement in the anatomic advances that took place a hundred years ago when Emil Kraepelin and his collaborators took on the enormous task of classification of psychiatric disorders based on rational scientific thinking new advances in genetics biochemistry neuroanatomy and pharmacotherapy of mental disorders have brought us even closer to a better understanding of complex disorders like schizophrenia bipolar disorder depression and even autism The major goal of the previous edition of this classic book was to update the busy clinician psychiatric resident and medical student with the most up to date information on etiology diagnosis and treatment of psychiatric disorders This goal remains the focus of the fourth edition of this book In this updated and expanded edition the reader will be provided with the most contemporary information and literature supported by a close survey of the field This new edition of this classic title with its focus on biologic and medical aspects of psychiatry will continue to be of significant help to all interested in the scientific practice of psychiatry Cannabinoid Receptors—Advances in Research and Application: 2013 Edition ,2013-06-21 Cannabinoid Receptors Advances in Research and Application 2013 Edition is a ScholarlyBrief that delivers timely authoritative comprehensive and specialized information about Cannabinoid CB2 Receptor in a concise format The editors have built Cannabinoid Receptors Advances in Research and Application 2013 Edition on the vast information databases of ScholarlyNews You can expect the information about Cannabinoid CB2 Receptor in this book to be deeper than what you can access anywhere else as well as consistently reliable authoritative informed and relevant The content of Cannabinoid Receptors Advances in Research and Application 2013 Edition has been produced by the world s leading scientists engineers analysts research institutions and companies All of the content is from peer reviewed sources and all of it is written assembled and edited by the editors at ScholarlyEditions and available exclusively from us You now have a source you can cite with authority confidence and credibility More information is available at <http://www.ScholarlyEditions.com> Steroid Receptors: Advances in Research and Application: 2011 Edition

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<https://pinsupreme.com/results/scholarship/HomePages/Resource%20Recovery%20Confinement%20And%20Remediation%20Of%20Environmental%20Hazards.pdf>

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