

[My Cart](#) | [My Profile](#) | [Log In](#) | [Athens Log In](#)

[HOME](#)  
[ABOUT US](#)  
[CONTACT US](#)  
[HELP](#)

[Home](#) / [Medical, Veterinary and Health Sciences](#) / [Oncology](#)

**International Journal of Cancer**

[What is RSS?](#)

**Volume 9999, Issue 9999, Pages NA -**

Published Online: 15 Apr 2008  
Copyright © 2005 Wiley-Liss, Inc., A Wiley Company

[Save Title to My Profile](#)     [Set E-Mail Alert](#)

Go to the homepage for this journal to access trials, sample copies, editorial and author information, news, and more. [▶](#)

[e-mail](#) [print](#)

**SEARCH**  All Content  
 Publication Titles

[Advanced Search](#)  
[CrossRef / Google Search](#)  
[Acronym Finder](#)

---

**SEARCH IN THIS TITLE**

All Fields

---

**SEARCH BY CITATION**

Vol:  Issue:  Page:

[Save Article to My Profile](#)     [Download Citation](#)     [Previous Abstract](#) | [Next Abstract](#) >

[Abstract](#) | [References](#) | Full Text: [HTML](#) | [Related Articles](#) | [Citation Tracking](#)

---

## Carcinogenesis

### Dietary prevention of malignant glioma aggressiveness, implications in oxidant stress and apoptosis

Daniel Pouliquen <sup>1,2,\*†</sup>, Christophe Olivier <sup>1,3</sup>, Eric Hervouet <sup>1,2</sup>, Francois Pedelaborde <sup>1,2</sup>, Emilie Debien <sup>1,2</sup>, Marie-Thérèse Le Cabellec <sup>1,2</sup>, Catherine Gratas <sup>1,2</sup>, Taku Homma <sup>4</sup>, Khaled Meflah <sup>1,2</sup>, Francois M. Vallette <sup>1,2</sup>, Jean Menanteau <sup>1,2</sup>

<sup>1</sup>Département de Recherche en Cancérologie, Institut de Biologie, Inserm, U601, Equipe Apoptose et progression tumorale, F-44000, Nantes, France  
<sup>2</sup>Faculté de Médecine, Département de Recherche en Cancérologie, Université de Nantes, IFR26, F-44000, Nantes, France  
<sup>3</sup>Laboratoire de Toxicologie, Faculté de Pharmacie, Université de Nantes, F-44000, Nantes, France  
<sup>4</sup>Pathology group, International Agency for Research on Cancer (IARC), Lyon, France

**email:** Daniel Pouliquen ([daniel.pouliquen@univ-nantes.fr](mailto:daniel.pouliquen@univ-nantes.fr))

<sup>\*</sup>Correspondence to Daniel Pouliquen, Département de Recherche en Cancérologie, Inserm U601, Equipe Apoptose et progression tumorale, 9 Quai Moncousu, F-44000, Nantes, France

<sup>†</sup>Fax: +33- 02-40-08-40-82.

**Funded by:**  
 • Association En Avant La Vie

---

**KEYWORDS**

oxidant stress • apoptosis • glioma • phytochemicals • diet

**ABSTRACT**

Our study explored the influence of diet on gliomagenesis and associated systemic effects (SE) in rats. The experimental diet contained various ingredients supposed to interfere with carcinogenesis, mainly phytochemicals (PtcD for phytochemical diet) and its effects were compared to those of the same diet without the phytochemicals (BD for basal diet). Glioma was induced by ethylnitrosourea to pregnant females fed the diets from the start of gestation until the moment of sacrifice of the offsprings. In male rats fed the PtcD or the BD the incidence of gliomas was markedly reduced compared to rats fed a standard diet (StD). In females this effect was weaker and was limited to the PtcD. A significant proportion of rats with brain tumors and fed the StD exhibited SE evidenced by weight loss, a shorter survival, reduction in liver weight and an increased proportion of liver mitochondria, effects that were not observed in their counterpart fed PtcD. Comparison of the expression of genes involved in the balance proliferation/apoptosis and in the response to oxidative stress in male brain tumors showed that the prevention of SE was associated with an increase in *bcl-2* and *catalase* and a decrease in *ki-67*, *sod-1* and *sod-2* transcripts. These results show that the degree of aggressiveness of gliomas can be modulated by dietary interventions and suggest that some phytochemicals with antioxidant properties could participate to the mechanism. © 2008 Wiley-Liss, Inc.

---

Received: 14 September 2007; Accepted: 18 January 2008

**DIGITAL OBJECT IDENTIFIER (DOI)**

**SOCIETY NEWS**

**world cancer congress**  
 27-31 August 2008 Geneva, Switzerland  
[www.uicc.org](http://www.uicc.org)

---

**NOW AVAILABLE**

**The Journal of Pathology Backfile Collection (1892-1996)**

Fully searchable and live-linked with current web content, this backfile brings the complete contents of this top-tier journal—dating back to Volume 1, Issue 1—to your desktop. A one-time fee delivers ongoing access with no strings attached.

[Find out more](#)  
[Request a Quote](#)

---

**SIGN UP NOW**

10.1002/ijc.23513 [About DOI](#)

## Related Articles

- Find other [articles](#) like this in Wiley InterScience
- Find articles in Wiley InterScience written by any of the [authors](#)

Wiley InterScience is a member of CrossRef.



Get select content from some of Wiley's leading publications delivered to your PDA — free!

[Sign up now](#)



## REPRINT INQUIRIES



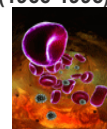
### Need a reprint?

Paper or electronic reprints are available for all content published on Wiley InterScience. Inquiries can be submitted online.

[Find out more about reprints](#)

## NOW AVAILABLE

### Oncology and Hematology Backfile (1966-1995)



Fully searchable and live-linked with current web content, this backfile brings the complete contents of 15 leading journals—18,400 articles—to your desktop. A one-time fee delivers ongoing access.

[Find out more](#)

[Request a Quote](#)

## ALSO OF INTEREST



### EBM Guidelines

#### (Evidence-Based Medicine)

The **key** source of practical information for primary care with the most extensive collection of concise treatment recommendations

[more](#)

## ALSO OF INTEREST



### Current Protocols in Cell Biology

Updated every three months, an essential reference for methods for researchers who

study the cell - its structure,  
organization, behavior, and  
functions.

Now available via individual  
online subscription!

Go to [Current Protocols  
in Cell Biology](#)

[About Wiley InterScience](#) | [About Wiley](#) | [Privacy](#) | [Terms & Conditions](#)

Copyright © 1999-2008 [John Wiley & Sons, Inc.](#) All Rights Reserved.