

Title (en)  
HYDROGEL MICROENCAPSULATED VACCINES

Title (de)  
MIKROVERKAPSELTE IMPFSTOFFE AUF HYDROGELBASIS

Title (fr)  
VACCINS MICROENCAPSULES SUR UNE BASE D'HYDROGEL

Publication  
**EP 0792161 A4 19980429 (EN)**

Application  
**EP 94923417 A 19940711**

Priority  
• US 9084193 A 19930712  
• US 14778193 A 19931104  
• US 9407749 W 19940711

Abstract (en)  
[origin: WO9502416A1] Water soluble polymers or polymeric hydrogels are used to encapsulate antigen to form vaccines. The antigen is mixed with a polymer solution, microparticles are formed of the polymer and antigen, and, optionally, the polymer is crosslinked to form a stable microparticle. Preferred polymers are alginate and polyphosphazenes, and mixtures thereof. Microparticles can be administered parenterally or mucosally. For oral delivery, the microparticles are preferably fifteen microns or less in diameter, and adhere to the mucosal lining of the gastrointestinal tract, increasing uptake by the reticuloendothelium.

IPC 1-7  
**A61K 39/00**; **A61K 39/38**; **A61K 39/21**; **A61K 39/29**; **A61K 39/145**; **A61K 39/165**; **A61K 39/15**; **A61K 39/13**; **A61K 39/20**; **A61K 39/25**; **A61K 39/245**

IPC 8 full level  
**A61K 9/50** (2006.01); **A61K 9/16** (2006.01); **A61K 39/00** (2006.01); **C08G 79/02** (2006.01); **C08G 79/025** (2016.01)

CPC (source: EP)  
**A61K 9/1641** (2013.01); **C08G 79/025** (2013.01); **A61K 2039/541** (2013.01); **A61K 2039/55555** (2013.01); **Y02A 50/30** (2017.12)

Citation (search report)  
• [X] CHEMICAL ABSTRACTS, vol. 118, no. 16, 19 April 1993, Columbus, Ohio, US; abstract no. 154240, GILLEY, R. M. ET AL: "Microencapsulation and its application to vaccine development" XP002055689 & PROC. INT. SYMP. CONTROLLED RELEASE BIOACT. MATER., 19TH (1992), 110-11. EDITOR(S): KOPECEK, JINDRICH. PUBLISHER: CONTROLLED RELEASE SOC., DEERFIELD, ILL  
• [X] ANDRIANOV A K ET AL: "Controlled release using ionotropic polyphosphazene hydrogels.", JOURNAL OF CONTROLLED RELEASE 27 (1). 1993. 69-77, XP002055688  
• [PX] CHEMICAL ABSTRACTS, vol. 119, no. 22, 29 November 1993, Columbus, Ohio, US; abstract no. 233952, ANDRIANOV, A. K. ET AL: "Polyphosphazene ionotropic gel microcapsules for controlled drug delivery" XP002055690 & PROC. INT. SYMP. CONTROLLED RELEASE BIOACT. MATER., 20TH (1993), 26-7. EDITOR(S): ROSEMAN, THEODORE J.;PEPPAS, NICHOLAS A.; GABELNICK, HENRY L. PUBLISHER: CONTROLLED RELEASE SOC., DEERFIELD, ILL  
• See references of WO 9502416A1

Designated contracting state (EPC)  
AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)  
**WO 9502416 A1 19950126**; AU 690567 B2 19980430; AU 7328694 A 19950213; BR 9407397 A 19961105; CA 2167081 A1 19950126; CN 1128953 A 19960814; EP 0792161 A1 19970903; EP 0792161 A4 19980429; JP H09500132 A 19970107; NZ 269411 A 20010330

DOCDB simple family (application)  
**US 9407749 W 19940711**; AU 7328694 A 19940711; BR 9407397 A 19940711; CA 2167081 A 19940711; CN 94193066 A 19940711; EP 94923417 A 19940711; JP 50465095 A 19940711; NZ 26941194 A 19940711