

**PCT**WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁷ : C12N 9/86, 15/00, 15/09, 15/63, 15/70, 15/74, 1/20, C12P 13/04, 13/06, C07H 21/04	A1	(11) International Publication Number: WO 00/58449
		(43) International Publication Date: 5 October 2000 (05.10.00)
(21) International Application Number: PCT/US00/08159 (22) International Filing Date: 28 March 2000 (28.03.00) (30) Priority Data: 60/126,923 29 March 1999 (29.03.99) US 60/157,427 4 October 1999 (04.10.99) US 09/497,585 3 February 2000 (03.02.00) US (71) Applicants: CALIFORNIA INSTITUTE OF TECHNOLOGY [US/US]; 1200 East California Boulevard, Pasadena, CA 92115 (US). DEGUSSA-HÜLS AG [DE/DE]; Rodenbacher Chaussee 4, D-63457 Hanau-Wolfgang (DE). (72) Inventors: ARNOLD, Frances, H.; 629 S. Grand Avenue, Pasadena, CA 91105 (US). MAY, Oliver; Fellbacherstrasse 41, D-70327 Stuttgart (DE). DRAUZ, Karlheinz; Zur Marienruhe 13, D-63579 Freigericht (DE). BOMMARIUS, Andreas; Waidmann Strasse 7, D-60596 Frankfurt am Main (DE). (74) Agents: OLDENKAMP, David, J. et al.; Oppenheimer Wolff & Donnelly LLP, Suite 3800, 2029 Century Park East, Los Angeles, CA 90067 (US).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i>  *G00002*
(54) Title: HYDANTOINASE VARIANTS WITH IMPROVED PROPERTIES AND THEIR USE FOR THE PRODUCTION OF AMINO ACIDS		
(57) Abstract Hydantoinase enzymes which are mutants of a previously isolated hydantoinase having the amino acid SEQ. ID. NO. 2. The mutants include amino acid substitutions at positions (95, 154, 180, 251 and/or 255) of the wild type hydantoinase (SEQ. ID. NO. 2). The mutant hydantoinases, like the parent hydantoinase, are used in the production of optically pure amino acids.  *162162*		