



VITA

Personal Data

Name : Rawia Fathy Gamal
Title : Prof.of Agric. Microbiology
Degree : Doctor of Philosophy(Agric.Microbiology 1976)
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Collegiate Institutions:

	Date	Degree	Graduation
Univ.Ain- Shams ,Cairo , Egypt	1963-67	B.Sc	1967
Univ.Ain-Shams, Cairo, Egypt	1967-71	M.Sc.	1971
Univ.Ain-Shams, Cairo , Egypt	1971-76	Ph.D.	1976

Position Held :

- 1) 1967-71 Demonstrator (Fac.of Agric.Ain-Shams Univ.)
- 2) 1971-76 Ass.Lecturer (Fac.of Agric.Dept.of Microbiology, in-Shams Univ.)
- 3) 1976-81 Lecturer (Fac.of Agric.Dept.of Microbiology, in-Shams Univ.)
- 4) 1982-83 Post doctor assignment in United Kingdom, Sussex Univ.
- 5) 1983-86 Associate prof. (Fac.of Agric.Dept.of Microbiology, in-Shams Univ.)
- 6) 1986-07 Professor (Fac.of Agric .Dept.of Microbiology, in-Shams Univ.)
- 7) 2005-07 Vice-Dean for community service and environmental affairs.
- 8) 2007-till now, Professor Emeritus of Agric. Microbiology.

Membership in Scientific Societies :

- 1) Egyptian Society of Applied Microbiology.
- 2) Egyptian Society of Genetics.
- 3) Egyptian Society of Mutagens
- 4) Egyptian Society of Organic Agriculture Environmental Protection(ESOAEP).
- 5) Egyptian Society of Agricultural Chemistry & Environmental Protection.

Other Activities :

- 1) I was chosen as an ideal students in Fac.of Agric.Ain Shams Univ. (1963).
- 2) Awarded a prize from Ain Shams Univ.for excellent scientific researches (1979)
- 3) Awarded a state prize from scientific research academy, with golden medal(1987).
- 4) Awarded a prize of young Arab Scientists (Abdelhamid Shoman) JOURDEN (1987) .
- 5) Awarded order of excellence of first rank from the president (MOBARAK) (1995).
- 6) Board of trustees' member in Ain Shams Center of Biotechnology and Genetic Engineering (ACGEG) 1997-2000.
- 7) Principle investigator of project entitled (Production of microbial polysaccharide) funded from Regional Council for research & extension, Ministry of Agric .and Land Reclamation(1999-2002).
- 8) Principle investigator of project entitled (Production of microbial carotenoid pigments from raw materials using different fermentation techniques) funded from Regional Council for Research and extension.Ministry of Agric.&Land Reclamation (2002-2004)
- 9) Principle investigator of applied project entitled (Enviromental,chemical&biological studies on ARAB EL-OLAYKAT lake in ABOZAABLE. Funded from Environmental sector in Ain Shams Univ.(2006-2007)
- 10) Principle investigator of project entitled (Bioconversion of some Egyptian raw materials to bioplastic) funded by Science and Technology Development (STDF) 2009-2011 .
- 11) Member of Scientific Committee for Professor Promotion, supreme council of universities (2001-2007).
- 12) Awarded a distinguish prize **درع التميز** from environmental sector in Ain-Shams Univ.,for the best achievement in that field (2007) .

13) Member of Scientific Committee in Biochemistry & Agricultural microbiology and genetic for professor & associate professor promotion (supreme council of universities) 2008-2011 .

14) Awarded certificate of IDEAL MOTHER ,Fac., of Agric., Ain-Shams Univ.(2007-8)

15) Awarded aprize of التقديرية from Ain-Shams University in Agriculture sector(2009-2010) .

Scientific published Books :

- ١ . التفاعلات الأيضية في الخلية البكتيرية (المكتبة الاكاديمية) ١٩٩٨
- ٢ . أساسيات الميكروبيولوجيا (المكتبة الأكاديمية) 2000
- ٣ . ميكروبيولوجيا التخمرات (دار الفكر العربي) ٢٠٠٥
- ٤ . عالم البكتريا (مكتبة اوزوريس) ٢٠٠٥

Scientific published papers:

Fermentation and Microbial Enzymes

1. Taha, S.M.; S.A.Z. Mahmoud; R.M. Attia and Rawia F. Gamal.
Production of subtilopeptidase by a strain of *B. subtilis*. Rev. Microbiol. (S. Paulo), 8 (4), 132-135 (1977).
2. Mahmoud, S.A.Z.; A.M. Abdel-Hafez; M. El-Sawy; M.E. El-Haddad and Rawia F. Gamal.
Factors affecting protease production by locally isolated strain of *B. stearothermophilus*. Res. Bull. 749 Fac. Agric., Ain Shams University, Cairo, Egypt. 1-24 (1977).
3. Mahmoud, S.A.Z.; M. El-Sawy; A.M. Abdel-Hafez; M. El-Haddad and Rawia F. Gamal.

Precipitation and purification of protease produced by the locally isolated strain *B. stearotherophilus* C-26. Res. Bull. 750 Fac. Agric., Ain Shams University (1977).

4. **Mahmoud, S.A.Z.; A.M. Abdel-Hafez; M. El-Sawy; M.E. El-Haddad and Rawia F. Gamal.**

Physical and chemical properties of bacterial thermoproteinase. Res. Bull. 751 Fac. Agric., Ain Shams University, (1977).

5. **Mahmoud, S.A.Z.; S.M. Attia and Rawia F. Gamal.**

Production and chemical studies of proteases from *B. subtilis* (SH-6). Egyptian strain. Zbl. Bakt. II. Abs. Bd. 133, S-121-24 (1978).

6. **Attia, R.M.; Rawia F. Gamal and A.M. Dokhan.**

Kinetic behaviour of soluble fungal alpha amylase from *Asp. niger*. Rev. Microbiol. (S. Paulo), 9 (3), 159-162, (1978).

7. **Gamal, Rawia F. and Rasmy M. Attia.**

Thermostable aminopeptidase from local isolate of *Bacillus stearotherophilus*. Zbl. Bact. II. Abt. 134, 733-739, (1979).

8. **Gamal, Rawia F.**

Utilization of agricultural wastes for cellulase production by *Aspergillus niger* (R-1237). Res. Bull. 1079, July, Fac. Agric., Ain Shams University, (1979).

9. **Rasmy M. Attia and Rawia F. Gamal.**

Some factors affecting the submerged production of citric acid by *Aspergillus niger* RA-32. Res. Bull. 1223 Dec., Fac. Agric., Ain Shams University, (1979).

10. **Rasmy, M. Attia and Rawia F. Gamal.**

Subtilopeptidase produced by *B. subtilis* PR-70. I-Kinetic behavior of solubilized enzyme. Zbl. Bakt. II. Abt. 134, 275-281, (1979).

11. **Rasmy M. Attia; Rawia F. Gamal and Alaa El-Demerdash.**
Subtilopeptidase A produced by *B. subtilis* PR-70. II. Kinetic behavior of immobilized enzym. Ibid. 352-359, (1979).
12. **Rasmy M. Attia; Rawia F. Gamal and A.M. Dokhan.**
Thermodynamic properties of free and immobilized subtilopeptidase from *B. subtilis* PR-70. Ibid., 135, 77-81, 1980.
13. **Rasmy M. Attia; Rawia F. Gamal and M.A. El-Demerdash.**
Kinetic behavior of immobilized amyloglucosidase. I. IR-45-Enzyme complex in batch process. Zbl. Bakt. II. Abt. 135 (1980), 704-709.
14. **Rasmy M. Attia; Rawia F. Gamal and M.A. El-Demerdash.**
Kinetic behavior of immobilized amyloglucosidase. II. IR-45-Enzyme complex in packed column. Ibid., 135 (1980), 710-714.
15. **Rasmy M. Attia and Rawia F. Gamal.**
Enzymatic properties of cellulose Cx from a local isolate of *Aspergillus niger* R-1237. Rev. Microbiol. (S. Paulo). 11 (2), (1980).
16. **Gamal, Rawia F.; R.M. Attia; S.A.Z. Mahmoud and S.H. Ahmed.**
Studies on the production of acid proteinase by submerged culture of local isolates. 1st Hon. Con. Agric. Bot. Sci., Mansoura Univ. 27-28 April (1983).
17. **Gamal, Rawia F.; S.A.Z. Mahmoud; S.H. Ahmed and R.M. Attia.**
Further studies on the production of acid protease by *Asp. niger* MS-38. 1st Hon. Con. Agric. Bot. Sci., 27-28 April (1983).
18. **Mahmoud, S.A.Z.; W.A. Mashhoor; Rawia F. Gamal; A.A. Refaat and Azhar A. El-Sayed.**
Production of Vitamin B₁₂ by propionic acid bacteria. I. Some factors affecting the production. Annals of Agric. Sci., Fac. Agric., Ain Shams Univ., Cairo, Egypt. 28, (3) 1099-1888, (1983).

19. Mashhour, W.A.; S.A.Z. Mahmoud; Rawia F. Gamal; A.A. Refaat and Azhar A. El-Sayed.

Production of Vitamin B₁₂ by propionic acid bacteria. II. Effect of nutritional & environmental factors on Vit. B₁₂ production by *Propionebacterium shermenii* P-16. Annals of Agric. Sci., Fac. Agric., Ain Shams Univ., Cairo, Egypt, 28, (3), 1099-1888, (1983).

20. **Attia, R.M.; Rawia F. Gamal and S.H. Ahmed.**

Observation on the infra red absorption spectra of acid proteinases from *Aspergillus niger*. Annals of Agric. Sci., Fac. Agric., Ain Shams Univ., Cairo, Egypt, 29 (1) 155-166 (1984).

21. **Gamal, Rawia F. and Neverty F. Gamal.**

Utilization of Agricultural residues for lactic acid production by local isolate of *Lactobacillus* sp. Annals of Agric. Sci., Fac. Agric., Ain Shams Univ., Cairo, Egypt. 29 (1), 145-152, (1984).

22. **Attia, R.M.; Rawia F. Gamal and S.H. Ahmed.**

Kinetic behaviour of acid proteinase from *Asp. niger*. Rev. Microbiol., Sao Paulo, 16 (3), 203-210, Jul. Sept. (1985).

23. **Attia, R.M.; Rawia F. Gamal and A.M. Dokhan.**

Physico-chemical properties of Glucose-Oxidase. Egypt. J. Microbiol., 22, No. 1, pp. 35-43 (1987).

24. **Mashhoor; W.A.; Rawia F. Gamal; A.A. Refaat and Sohair A. Nasr.**

Submerged production of citric acid by strains of *A. niger*. Annals Agric. Sci., Fac. Agric., Ain Shams Univ., Cairo, Egypt. 32, (2), 1005-1021 (1987).

25. **Mashhoor, W.A.; Rawia F. Gamal; A.A. Refaat and Sohair A. Nasr.**

Cane molasses as a substrate for submerged production of citric acid by *Asp. niger*. Annals of Agric. Science, Ain Shams Univ., 32 (3) 1489-1506, 24 Ref. (1987).

26. **Mashhoor, W.; Rawia F. Gamal; A.A. Refaat and Sohair A. Nasr.**

Effect of trace elements and vitamins on submerged production of citric acid by *Asp. niger*. Annals of Agric. Science, Ain Shams Univ., 33 (1) 153-162 (1988).

27. Gamal, Rawia F.; M. El-Sawy; E.M. Ramadan and S.A. El-Sayed.

Factors affecting production of citric acid by *Saccharomyopsis lipolytica* 70561 using fermentor by a batch culture technique. Egypt. J. Microbiol., 23, No. 2, pp. 315-328 (1988).

28. Ramadan, E.M.; Rawia F. Gamal; M. El-Sawy and S.A. El-Sayed.

The biological activity of *Saccharomyopsis lipolytica*. 70551 for citric acid production in a continuous culture. Egypt. J. Microbiol., 23, No. 1, pp. 43-58 (1988).

29. Nassar, Fatma R.; Rawia F. Gamal; Abd El-Hady, Hemat M. and M. El-Sawy.

Effect of some environmental factors on the production of Glycerol by osmotolerant yeast. Zagazig J. Agric. Res. Vol. 18 (2) (1991).

30. Gamal, Rawia, F.; Nassar, Fatma R.; M. El-Sawy and Hemat M. Abd El-Hady.

Effect of some nutritional factors on the production of Glycerol by osmotolerant yeast. Zagazig J. Agric. Res. Vol. 18 (2) 1991.

31. El-Beih, Fawkia M.; M.R. Abu-Shasy; Rawia F. Gamal and M.K. Abd El-Rehim.

Factors affecting the production of extracellular alkaline proteinase by two local isolates of *B. amyloliquefaciens*. Annals of Agric. Science, Ain Shams Univ., Cairo, 36 (2), 363-376 (1991).

32. El-Beih, Fawkia M.; Rawia F. Gamal; M.R. Abu Shady and M.K. Abdel-Rehim.

Purification & Physicochemical properties of an extra-cellular alkaline proteinase produced by two local isolates of *B. amyloliquefaciens*. Annals of Agric. Science, Ain Shams Univ., Cairo, 36 (2), 377-387 (1991).

33. **El-Beih, Fawkia M.; Rawia F. Gamal; M.R. Abu-Shady and M.K. Abd El-Rehim.**

Kinetic behavior of alkaline proteinase produced by *B. amyloliquefaciens*. Annals of Agric. Science, Ain Shams Univ., 36 (2), 389-404 (1991).

34. **Nassar, Fatma R.; Rawia F. Gamal; Hemat M. Abd El-Hady and M. El-Sawy.**

Glycerol production by osmotolerant yeast strain using shake flasks & fermentor as a batch culture technique. Annals Agric. Sci., Ain Shams Univ., Cairo, 36 (2), 405-412, (1991).

35. **Gamal, Rawia F.; Fatma R. Nassar; Hemmet M. Abd El-Hady and M. El-Sawy.**

Glycerol production by osmotolerant yeast strain using fermentor as Fed-batch & continuous culture technique. Annals Agric. Sci., Ain Shams Univ., Cairo 36 (2), 413-421, (1991).

36. **Gamal, Rawia F.; E.M. Ramadan; Hemat, M. Abdel-Hady and Gehan, F. Galal.**

Sodium chloride on the biological activity of yeast isolated from some foodstuffs. Annals Agric. Sci., Ain Shams Univ., Cairo 43 (1), 99-116, (1998).

37. **Ramadan, E.M.; Rawia F. Gamal and Gehan F. Galal.**

Effect of osmotic potential of sucrose on the biological activity of yeast. Annals Agric. Sci., Ain Shams Univ., Cairo 43 (1), 73-98, (1998).

38. **Gamal, Rawia F.; Hemmat, M. Abdel-Hady and Enas M. Elgarhy.**

Factors affecting fungal pretreatment of bagasse for thermomechanical pulping (TMP). Annals Agric. Sci., Ain Shams Univ., Cairo 38 (2): 833-849 (2000).

39. **Osman, G.A.; Kamel, M.M.; Rawia F. Gamal; Abdel-Hady Hemmat, M. and Al-Harrawy, A.Z.** Microbiological quality of some bottled water in Egypt. *Journal of Environmental Sciences*, Vol. 31, 77-89 (2006).
40. **Enas, A.H. El-Garhy; Rawia F. Gamal; Hemmat M. Abdelhady; Zenat A. Nageeb and Yossri M. Ahmad.** Biochemical pulping of sugarcane bagasse using *Ceriporiopsis subvermispora* SS-33 fungal influenced by physical and biological pretreatments. *Res. Bull., Fac. Agric., Ain Shams Univ.* (2006).
41. **Gamal, Rawia F.; Hemmat, M. Abdel-Hady; Sohair A. Nasr; A.S. Bochandy and Enas I. Raafat.**
Optimization of alternan production by newly isolated *L. mesenteroids*. *Arab J. of Nuclear Science & Application* Accepted on 11 January (2007).
42. **Gamal, Rawia F.; Hemmat M. Abdel-Hady; Sh.M. Selim; A.F. Hussein and Gehan F. Galal.**
Evaluation of carotenoids produced by *Rhodotorula glutinis* using bioreactor with different feeding techniques. *Annals Agric. Sci., Ain Shams Univ., Cairo* 52 (1), 61-73, (2007).
43. **Gamal, Rawia F.; Elbeh, F.M.; El-Masry, H.G.; Kahil, T.A. and Bakhit, S.H.**
Recycling of Waste Papers by Fungal Deinking Enzymes. *J. of Environmental Science*, Vol. 4 No. 4, (2007).

Single Cell Protein Production

44. **Gamal, Rawia F.; M. El-Sawy; E.M. Ramadan and Hemmat M. Abd El-Hady.**

Protein production from *Candida utilis* in continuous culture. Egypt.J. Microbiol., Special Issue, pp. 65-80 (1985).

45. **Gamal, Rawia F.; M. El-Sawy; E.M. Ramadan and Hemmat M. Abd El-Hady.**

Effect of substrate pretreatment on microbial protein production. Egypt. J. Microbiol., Special Issue, pp. 81-90 (1985).

46. **Ramadan, E.M.; M. El-Sawy; Rawia F. Gamal and Hemmat Abd El-Hady.**

Growth parameters of yeast grown on Agricultural residues using shake flasks as a batch culture. Annals Agric. Sci., Fac. Agric., Ain Shams Univ., Cairo, Egypt. 30 (1), 25-45 (1985).

47. **El-Sawy, M.; Rawia F. Gamal; E.M. Ramadan and Hemmat Abd El-Hady.**

Production of SCP by *C. utilis* and *C. pelliculosa* using fermentor as a batch culture. Annals Agric. Sci., Fac. Agric., Ain Shams Univ., A.R. Egypt. 30 (1), 47-61 (1985).

48. **Gamal, Rawia F.; E.M. Ramadan; M. El-Sawy and Hemmat Abd El-Hady.**

Studies on the production of SCP using *C. utilis* CBS-621 and *C. pelliculosa* P₆ in the fermentor as a fed batch culture. Ibid. 30 (2), 755-771 (1985).

49. **Nemat, A. Noureldin; Rawia F. Gamal and E.M. Ramadan.**

Utilization of maize waste products for production of microbial protein: 4- Production of SCP using different cellulytic fungi and yeast using maize residues variety Giza-2. Annsla Agric. Sci., Fac. Agric., Ain Shams Univ., Cairo, Egypt, 31 (1986).

50. **Nemat, A. Noureldin; M.S. El-Habbal and Rawia F. Gamal.**

Utilization of Maize waste products for production of microbial protein. 6. Evaluation of the biomass of some microorganisms grown on maize stover. Annals Agric. Sci., Fac. Agric., Ain Shams Univ., Cairo, Egypt. 31 (1), (1986).

Biofertilization :

51. **Moawad, H.; S.A.Z. Mahmoud; S.M.S. Badr El-Din; Rawia F. Gamal and M.H. Enany.**

Transformation and effects of urea derivatives in soil. Z. Pflanzenennaehr, Bodek, 147, 785-792 (1984).

52. **Badr El-Din, S.M.S.; H. Moawad; S.A.Z. Mahmoud; Rawia F. Gamal and M.H. Enany.**

Urease inhibition by metals and its relation to nitrogen transformations. Ibid., 148, 551-558 (1985).

53. **Mahmoud, S.A.Z.; H. Moawad; S.M.S. Badr El-Din; Rawia F. Gamal and M.H. Enany.**

Urease activity and ureolytic microorganisms in Egyptian soils. Egypt. J. Microbiol. 21 (1): 73-80, (1986).

54. **Rawia F. Gamal; S.A.Z. Mahmoud; H. Moawad; S.M. Badr El-Din and H.M. Enany.**

Regulation of urea hydrolysis in soils using some organic compounds. Egypt. J. Microbiol., 22, No. 1, 1-10 (1987).

55. **El-Demerdash, M.E.; W.A. Mashhoor; Rawia F. Gamal and Sohair A. Nasr.**

Effect of nutritional factors on the accumulation of poly- β -Hydroxybutyrate in N_2 -fixers. Egyptian Society of Applied Microbiology. Proc. VIII Conf. Microbial., Cairo, March, pp. 29-41, (1993).

56. **El-Demerdash, M.E.; Rawia F. Gamal; W.A. Mashhoor and Sohair A. Nasr.**

Response of wheat plants to inoculation with high or low-PHB cells of associative N_2 -fixers. Egyptian Society of Applied Microbiology. Proc. VIII Conf. Microbial., Cairo, March, pp. 67-78, (1993).

57. **Gamal, Rawia F.; M. E. El-Demerdash; W.A. Mashhoor and Sohair A. Nasr.**

Accumulation of Poly- β -hydroxybutyrate in associative N_2 -fixers as affected by environmental factors. Egyptian Society of Applied Microbiology, Proc. VII Conf. Microbial., Cairo, March, pp. 43-52, (1993).

58. **Mashhoor, W.A.; M.E. El-Demerdash; Rawia F. Gamal and Sohair A. Nasr.**

Some physiological characteristics of high and low PHB cells of associative N_2 -fixers. Egyptian Society of Applied Microbiology, Proc. VIII Conf. Microbial., Cairo, March, pp. 53-65 (1993).

Microbial Physiology

59. **Ramadan, E.M.; Rawia F. Gamal; Hemmat, M. Abdel-Hady and Gehan F. Galal.**

Effect of osmotic potential of sugar on the biological activities of yeast. Annals Agric. Sci., Ain Shams Univ., Cairo 43 (1), 73-98, (1998).

60. **Gamal, Rawia F.; E.M. Ramadan; Hemmat M. Abd El-Hady and Gehan, F. Galal.**

Effect of osmotic potential of sodium chloride on the biological activities of yeast isolated from some foodstuffs. Annals Agric. Sci. 43 (1), 99-116, (1998).

61. **Mashhoor, W.A.; Rawia F. Gamal; M.N. Abou-Seada and Habiba M. Ahmed.**

Lethality and injury rates of *E. coli* and *Enterococcus faecalis* exposed to different stress conditions. Annals Agric. Sci., 43 (2), 295-315, (1998).

62. **Mashhoor, W.A.; Rawia F. Gamal; M.N. Abou-Seada and Habiba M. Ahmed.**

Recovery of injured bacterial cells induced during processing of carbonated beverages. Annals 43 (2), 317-336, (1998).

Microbial Toxins

63. **El-Sawy, M.; Rawia F. Gamal; Khayria Naguib and O.M. Sharaf.**

Viability of *Staph. aureus* and presence of TNase and enterotoxins in Egyptian Zabady during manufacturing and stored at different temperatures. Annals Agric. Sci., Fac. Agric., Ain Shams Univ., Cairo, Egypt. Vol. 31 (1), 35-67 (1986).

64. **Gamal, Rawia F.; M. El-Sawy; Khayria Naguib and O. Sharaf.**

Survival of enterotoxigenic *Staph. aureus* type-A in Egyptian butter. Egypt. J. Microbiol. Special Issue, pp. 37-46 (1986).

65. **Khayria Naguib; M. El-Sawy; Rawia F. Gamal and O.M. Sharaf.**

Incidence of *Staph. aureus* and their enterotoxins A or B in some Egyptian soft dairy products. Annals Agric. Sci., Fac. Agric., Ain Shams Univ., Cairo, Egypt 31 (1), (1986).

Genetic Engineering

66. **Kennedy, C.; R. Robson; R. Jones; P. Woodley; D. Evans; P. Bishop; R. Eady; Rawia F. Gamal; R. Humphrey; J. Ramos; O. Dean and J. Postgate.**

Genetic and physical characterisation of *nif* and *ntr* genes in *A. chroococcum* and *A. vinelandii*. 6th International Symposium on Nitrogen Fixation. August 4-10, pp. 469-476, Corvallis Oregon, USA (1985).

67. **Kennedy, C.; Rawia F. Gamal; J. Ramos; R. Humphrey; D. Dean and K. Brigle.**

6th International Symposium on Nitrogen fixation, August 4-10, pp. 469-476. Corvallis Oregon, USA (1985).

68. **Kennedy, C.; Rawia F. Gamal; R. Humphrey; J. Ramos; K. Brigle and D. Dean.**

The *nif H.*, *nif M* and *nif N* genes of *A. vinelandii*; characterisation by Tn5 mutagenesis and isolation from PLAFRI gene banks. Mol. Gen. Genet. 205, 318-325 (1986).

69. **Abd El-Halim, M.M.; M. Abd El-Salam; Rawia F. Gamal and A.G. Attallah.**

Streptococcus lactis, Rennin or rennin-like producing transformants: I. Construction and Genetic stability. Annals Agric. Sci., Ain Shams Univ., Cairo, 39 (1), 127-136, (1994).

70. **Eweda, W.E.; Rawia F. Gamal; M.M. Abd El-Halim and A.G. Attaiah.**

Streptococcus lactis, Rennin or rennin-like producing transformants:II. Gene expression. Egypt. J. Appl. Sci., 9 (6) (1994).

71. **Abd El-Halim, M.M.; M.S. Abdel-Salam; Rawia F. Gamal; W.E. Eweda and A.G. Attalah.**

Streptococcus lactis. Rennin or rennin-like producing transformants: III. Gene location. Egypt. J. Appl. Sci.; 9 (6) (1994).

72. **Abdel-Maksoud M.; Rawia F. Gamal, Hanan, A._Nour El-Din; M.O. Wasfy and A.S. Sadik.**

Microbiological, Molecular and Serological studies on *Mycobacterium tuberculosis* from animal and human sources. Res. Bull., Ain Shams Univ. (2005).

73. **Gamal, Rawia F.; S.R. Al-Fateh; Abeer M. Mohammed and M. El-Sawy.**

Optimization of a culture medium for biomass & δ - Endotoxin production by a recombinant *E. coli* strain. Arab Univ. J. Agric. Sci., Ain Shams Univ., Cairo, 16 (1), 41-55 (2008).

78. **Gamal, Rawia F.; Sohair, A. Nasr; S.A. Abd El-Menem and Dalia, A.M. Meligy.**

Biodeterioration of ancient papyrus by fungi, treatment & conservation of new papyrus. Arab. Univ. J. Agric. Sci., Ain Shams Univ., Cairo, 12 (2), 527-544, (2004).

Bioremediation

74. **Gamal, Rawia F.; Sohair, A. Nasr and Hala, A. Ibrahim.**

Bioleaching of uranium from Granite ore using Helwan sulfur water. Arab Universities, Journal of Agricultural Sciences., Ain Shams Univ., Cairo, 9 (1), 109-126, (2001).

75. **Ramadan, E.M.; Rawia F. Gamal; Sohair, A. Nasr and Hala, A. Ibrahim.**

Bioleaching of uranium from some Egyptian ores using local fungal strains. Arab. Univ. J. Agric., Sci., Ain Shams Univ., Cairo, 9 (1), 127-143 (2001).

76. **Hassan, M.A.; Rawi, F. Gamal; Soher A. Nasr and Hala, A. Ibrahim.**

Bioleaching of heavy metals by fungi as a technique of ORE-dressing applied to ORE-materials in SINAI Egypt. The 10th International Mining, Petroleum and Metallurgical Engineering Conference, Assiut, Egypt. March (2007).

Biological Control

77. **Gamal, Rawia F.; Meneret Z. Roshdy; Sherif M. Hafez and Menerva M. Tadros.**

The Molluscidal activity of some local bacterial isolates and commercial *B. thuringiensis* strains on hatchability, mortality and growth rate of *Biomphalaria alexandrina* snails. J. of Environmental Science, Vol. 1 No. 2, Dec., (2002).

78. **Gamal, Rawia, F.; Sohair, A. Nasr; S.A. Abd El-Menem and Dalia A.M. Meligy.**

Biodeterioration of ancient papyrus by fungi, treatment & conservation of new papyrus. Arab Univ. J. Agric. Sci., Ain Shams Univ., Cairo, 12 (2), 527-544, (2004).