

## Asma GATI



**Nationality :** Tunisian

**Date and Place of birth :** 18/01/1977, Tunis

**Marital Status:** Married, 2 daughters

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### Academic Qualification

1. **Postdoctoral Habilitation (HDR)** in Immunology, Faculty of Science, Univeristy of EL Manar, Tunis/ Tunisia 2014.
2. **Ph.D** in Immunology, Faculty of medecine, University of ParisV René Descartes, Paris/France 2003.
3. **M.Sc** in Immunology, Faculty of medecine, University of ParisV René Descartes, Paris/France 1999.
4. **B.Sc** in Natural Sciences, Faculty of Science, Univeristy of EL Manar, Tunis/ Tunisia 1998.
5. **Diploma (Baccalaureate)** in Experimental Science, Tunis/ Tunisia 1994.

### POSITION

1. **Associate Professor in Immunology (2015-Present).** Faculty of Science, Univeristy of EL Manar, Tunis/ Tunisia
2. **Assistant Professor, (2005-2015):** Faculty of Science, Univeristy of EL Manar, Tunis/ Tunisia
3. **Postdoctorant, (2003-2006):** Klinik und Poliklinik für Onkologie, UniversitätsSpital, zürich/ Swizerland
4. **Researcher, (1999-2003):** Unity INSERM U487, Institut Gustave Roussy, Villejuif/France
5. **Researcher, (1998-2009):** Unity CNRS UMR1598, Institut Gustave Roussy, Villejuif/France

### Responsibilities

1. **Elected Member of the council of University Tunis El Manar (2020-Present)**
2. **National Contact Point for Horizon Europe program (NCP European Innovation Council ) (2021-Present)**
3. **National Contact Point for Horizon 2020 program (NCP Innovation SME) (2019-2020)**
4. **Institutional Focal Point Horizon 2020 program, PFI-FST (2019-Present)**
5. **Coordinator of the Immunology Master (2018-Present).** Faculty of Science, Univeristy of EL Manar, Tunis/Tunisia.
6. **Co-Cordinator of the Professional Master: Cellular and Molecular Technologies in Bio Health (2019-2020).** Faculty of Science, Univeristy of EL Manar, Tunis/ Tunisia.
7. **Head of the PAQ FST cellular technologies platform** in the Faculty of Sciences of Tunis ( 2011-present)

## RESEARCH WORK

1. **Head of Tumor Immunology group in the Laboratory of Genetic Immunology and Human pathology (LGIPH)**, Faculty of Science of Tunis, Tunisia. Running Project: Obesity and Cancer: Role of adipokines in the modulation of the tumor-immune system conflict (2015-Present)
2. **Postdoctoral Habilitation:** Characterization of immune response against the melanocyte antigen RAB38/NY-MEL-1 in melanoma patients. **Klinik und Poliklinik für Onkologie**, UniversitätsSpital Zürich, Switzerland.
3. **Ph.D:** Immune response in Renal cell carcinoma: Implications of inhibitory NK receptors in tumor escape. **INSERM U487:** "Cytokines et Immunologie des tumeurs" Institut Gustave Roussy, Villejuif, France.
4. **M.Sc:** Analysis of Bln helicase interaction and RACK1 receptor of protein kinase C in Bloom Syndrom. **CNRS UMR 1598 :** " Interactions Moléculaires et Cancer" Institut Gustave-Roussy, Villejuif, France.

## RESEARCH PROJECT

1. **Federated Research Project:** Collaboration for Epidemiological Watch and Immune Characterization: Optimization of the Use of Data for Prediction and Protection (COVID-PP): **Pilot Committee and WP leader**, (2020-2022)
2. **Horizon 2020 Intra Afrique Mobility Program:** MoBility for Research and African Integration through Health Sciences (**BRAINS**). **National Coordinator, Pilot and Executive Committee** (2021-2026)
3. **Tunisian-Moroccan project :** Effet de la spirulina sur le développement des cancers coloréctaux : **Principal Investigator**, (2020-2023)
4. **Horizon 2020 Intra Afrique Mobility Program :** Appui à la Formation, à la Recherche et à l'Innovation pour le Développement Intra-Afrique (**AFRIDI**): **Pilot and Executive Committee**, (2019-2024)
5. **PAQ-Development of the strategic management of university:** Governance and Autonomy, Guarantee of Excellence (**PAQ-GAGE**) **Pilot and Executive Committee** (2019-2022)
6. **PAQ- Development of the strategic management of Establishments :** Quality, Autonomy, Excellence Employability and Novation (**PAQ-QUEEN**) **Pilot and Executive Committee** (2021-2022)
1. **PAQ –COCO:** Improving the Quality and Employability of the TCMB Professional Master, **Pilot and Executive Committee** (2019-2022)
2. **PHC-Utique CMCU 13G0819:** Role of adipose tissue in breast cancer progression: **Principal Investigator** (2012-2015)
3. **Italie- Tunisa Project Transfrontalier:** Autoimmunity: Computer aided diagnosis (AIDA): **Co-executive** (2013-2015)
4. **DGRST/INSERM 08/M07:** Immune response in Renal Cell Carcinom. **Co-executive** (2006-2008)
5. **DGRST/INSERM 04/M03** (Breast Cancer in Tunisia). **Executive** (2003-2006)

## Memberships and affiliation

1. **Member of the quality Committee** of the Faculty of Science of Tunisia
2. **Member of the bureau of the Tunisian Society of Immunology** (2014-present)
3. **Member of the Department of Biology of the Faculty of Sciences of Tunis** (2011-2017) and (2020-Present)

## Competences and Qualifications

**EDUCATION:** Immunology, Immunopathology, Immunogenetic, Molecular Biology, Oncogenetic

**TECHNICAL SKILLS:**

- Immunology and Cell Biology: Cell culture (cell lines and primary cells), Cell separation: Immuno-magnetic cell sorting and flow cytometry, ELISA, Flow cytometry, Transfection of eukaryotic cells (electroporation, viral vectors), Spectrofluorimetry (Measurement of variations in intracellular calcium concentration), Immunocytochemistry, confocal microscopy, Functional Analysis: proliferation, cytotoxicity, migration assays, cell cycle, ...
- Evaluating promising immunotherapy strategies : Immunomonitoring, validation of cell-based assays
- Molecular Biology and Biotechnology: Molecular cloning, Bacterial transformation, Screening techniques (PCR, restriction enzymes), PCR (classic and real time), Screening of genomic DNA libraries, RNA and DNA extraction, RT-PCR, Preparation of cytoplasmic and nuclear protein extracts, Western blot, Immunoprecipitation and co-immunoprecipitation, Inhibition of gene expression by siRNA
- Mastery of computers: Windows Office; EndNote; Adobe Photoshop; CellQuest; Analysis, manipulation and assembly of sequences DNA and proteins, MS-Project, SPSS, PRISM, Image J, ...

**Qualifications:** Strategic thinking, ability to work in a team, initiative and problem solving, coaching research associates, good organization and planning, adaptability, communication skills, autonomy, flexibility, pedagogy, collaborating with external entities and pharmaceutical companies (cytopharma, Sanofi...).

## AWARDS RECEIVED

1. Doctoral fellowship from the ARC (Cancer Research Association- Villejuif, France) (2001-2002)
2. Doctoral fellowship from the Ligue contre le cancer, France (2000-2001)

## PUBLICATIONS

1. Curcumin attenuated neurotoxicity in sporadic animal model of Alzheimer's disease. Ines ELBini Dhouib, Raoudha Doghri, Amenallah Ellefi, Imen Degrach, Najet Srairi-Abid, **Asma Gati**. **Molecules**, Molecules. 2021 May 18;26(10):3011. doi: 10.3390/molecules26103011.
2. Leptin decreases susceptibility BC Cells to NK-lysis via PGC-1a pathway. Hichem Bouguerra, Gorra Amal, Stephan Clavel, Hamouda Boussen, Jean-François Louet, **Asma Gati**. **Endocrine connections**. 2020 Jun;9(6):578-586. doi: 10.1530/EC-20-0109.

3. Leptin promotes prostate cancer proliferation and migration by stimulating the STAT3 pathway. Amal Gorrab, Alessandra Pagano, Khoulood Ayed, Mohamed Chebil, Amine Derouiche, Hervé Kovacic and **Asma Gati**. **Nutr Cancer**. 2020 Jul 22:1-11. doi: 10.1080/01635581.2020.1792946.
4. Amira Gabsi, Xavier Heim, Akram Dlala, **Asma Gati**, Haifa Sakhri, Ahmed Abidi, Sonia Amri, Bilel Neili, Aurelie S. Leroyer, Alexandrine Bertaud, Monia Smiti Khanfir, Fatma Said, Mohamed Habib Houman, Brigitte Granel, Marcel Blot-Chabaud, Nathalie Bardin, Raja Marrakchi. TH17 cells expressing CD146 are significantly increased in patients with Systemic sclerosis **Scientific Report** 2019; 9: 17721. Published online 2019 Nov 27.
5. Dhoubi IB, Annabi A, Doghri R, Rejeb I, Dallagi Y, Bdiri Y, Lasram MM, Elgaaied A, Marrakchi R, Fazaa S, **Gati Asma**. Neuroprotective effects of curcumin against acetamiprid-induced neurotoxicity and oxidative stress in the developing male rat cerebellum: biochemical, histological, and behavioral changes. **Environ Sci Pollut Res Int**. 2017 Dec;24(35):27515-27524. doi: 10.1007/s11356-017-0331-5.
6. **Gati Asma**, Gorrab A, Marrakchi R, Derouiche A, Chebil M, Ben Ammar Elgaaied A. Comparison of circulating and intratumoral regulatory T cells in patients with renal cell carcinoma. *Tumour Biol*. 2015 May; 36 (5):3727-34.
7. Bouguerra Hichem, Guissouma Hajer, Labidi Soumaya, Stambouli Nejla, Marrakchi Raja, Chouaib Salem, Ben Ammar Elgaaied Amel, Boussen Hammouda and **Gati Asma**. (2014) Breast cancer in Tunisia : Association of body mass index with tumors histopathological aspects. **APJCP 15(16) :6805-10**
8. **Gati Asma**, Gorrab Amal, Marrakchi Raja, Derouiche Amine, Chebil Mohammed, and Ben Ammar Elgaaied Amel. (2015) Comparison of circulating and intratumoral regulatory T cells in patients with renal cell carcinoma. *Tumor biology*,
9. **Gati Asma**, Soumaya koudhi, Raja Marrakchi, Amel El Gaaied, Nadia Kourda, Derouiche Amine, Chebil Mohamed, Anne Caignard and Aurélie Perier. (2014) Obesity and renal cancer: Role of adipokines in the tumor-immune system conflict. **Oncoimmunology Jan 1;3(1):27810**
10. **Gati Asma**, Lajmi Nesrine, Derouiche Amine, Marrakchi Raja, Chebil Mohammed, Ben Ammar-El gaaied Amel. (2011) NY-ESO-1 expression and immunogenicity in prostate cancer patients. **Tunisie Medicale 89(10):779-83**.
11. **Gati Asma**, Zippelius A, Bartnick T, Walton S, Odermatt B, Jaeger E, Dummer R, Urosevic M, Filonenko V, Osanai K, Moch H, Chen YT, Old LJ, Knuth A, Jaeger D. (2007) Melanocyte differentiation antigen RAB38/NY-MEL-1 induces frequent antibody responses exclusively in melanoma patients. **Cancer Immunology Immunotherapy**. Feb;56(2):249-58. May 23.
12. **Gati Asma**, Da Rocha S, Guerra N, Escudier B, Moretta A, Chouaib S, Angevin E, Caignard A. (2004) Analysis of the natural killer mediated immune response in metastatic renal cell carcinoma patients. **International Journal of Cancer**. Apr 10;109(3):393-401.
13. **Gati Asma**, N Guerra, C Gaudin, S Da rocha, B Escudier, Y Lécluse, A Bettaieb, S Chouaib and A Caignard. (2003) CD158 receptor protects antigen specific CTL from Tumor induced AICD by controlling Fas signaling. **Cancer Research** Nov 1;63(21):7475-82.
14. **Gati Asma**, N Guerra, J Giron-Michel, B Azzarone, E Angevin, A Moretta, S Chouaib and A Caignard. (2001) Tumor cells regulate the lytic activity of tumor specific CTL by modulating the inhibitory NK-receptor function. **Cancer Research** 61, 3240-3244, April 15.
15. **Gati Asma**, G Dorothée, J Thiery, M El Behi, N Guerra, C Richon, F Mami-Chouaib, A Caignard, M Diarra-Mehpour, S Chouaib. Tumor/cytotoxic effector cross-talk in the control of tumor susceptibility to lysis. **Bulletin du Cancer** 2003; 90 (8-9):686-94.
16. Pittet MJ, **Gati Asma**, Le Gal FA, Bioley G, Guillaume P, de Smedt M, Plum J, Speiser DE, Cerottini JC, Dietrich PY, Romero P, Zippelius A. (2006) Ex vivo characterization of allo-MHC-restricted T cells specific for a single MHC-peptide complex. **Journal of Immunology**.
17. N Guerra, F Michel, **Gati Asma**, Catherine Gaudin, Z Michel, B Escudier, O Acuto, S Chouaib, and A Caignard. Engagement of the inhibitory receptor CD158a interrupts TCR signalling

- preventing dynamic membrane reorganization in CTL/tumor cell interaction. **Blood** 100(8):2874-81, Oct 15 2002.
18. S Chouaib, J Thiery, **Gati Asma**, N Guerra, M El Behi, G Dorothee, F Mami-Chouaib, D Bellet and A Caignard. Tumor escape from killing : Role of killer inhibitory receptors and acquisition of tumor resistance to cell death. **Tissu antigen** 60(4):273-81, Oct 2002.
  19. M. Ammar, C. Souissi-Bouchlaka, **Gati Asma**, I. Zaraa, R. Bouhaha, S. Kouidhi, A. Ben Ammar-Gaied, N. Doss, M. Mokni, R. Marrakchi. (2014) Psoriasis: Physiopathology and immunogenetics. **Pathologie Biologie** 01 (IF : 1.07)M. Ammar, C. Souissi-Bouchlaka, **Gati Asma**, I. Zaraa, R. Bouhaha, S. Kouidhi, A. Ben Ammar-Gaied, N. Doss, M. Mokni, R. Marrakchi. (2013) Le psoriasis : physiopathologie et immunogénétique. **Pathologie Biologie**
  20. Walton SM, Gerlinger M, de la Rosa O, Nuber N, Knights A, **Gati Asma**, Laumer M, Strauss L, Exner C, Schäfer N, Urosevic M, Dummer R, Tiercy JM, Mackensen A, Jaeger E, Lévy F, Knuth A, Jäger D, Zippelius A. (2006) Spontaneous CD8 T cell responses against the melanocyte differentiation antigen RAB38/NY-MEL-1 in melanoma patients. **Journal of Immunology**. Dec 1;177(11):8212-8.
  21. Messai Y, Noman MZ, Derouiche A, Kourda N, Akalay I, Hasmim M, Stasik I, Ben Jilani S, Chebil M, Caignard A, Azzarone B, **Gati Asma**, Ben Ammar Elgaaiied A, Chouaib S. (2010) Cytokeratin 18 expression pattern correlates with renal cell carcinoma progression: relationship with Snail. **Int J Oncol**. May;36(5):1145-54.

## Major speaker invitations

1. Asma GATI, Nadia Guerra, Salem Chouaib and Anne Caignard. Regulation of tumor specific cytotoxic T lymphocyte by inhibitory NK receptor. Leiden University Medical Center, Hollande Octobre 2003.
2. Asma GATI, Nadia Guerra, Catherine Gaudin, Bernard Escudier, Salem Chouaib and Anne Caignard. Tumor cells regulate the lytic activity of tumor specific CTL by modulating the inhibitory NK-receptor function. Universitätsspital Zürich Suisse, Novembre 2003.
3. Asma GATI, Nadia Guerra, Salem Chouaib and Anne Caignard. Role of the inhibitory NK receptors to control the function of antigen specific CTL in metastatic Renal Cell carcinoma. 2nd International symposium on the clinical use of cellular products: Cellular therapy 2003. Regensburg Allemagne, Mars 2003.
4. Asma GATI, Nadia Guerra, Salem Chouaib and Anne Caignard. Regulation of tumor specific cytotoxic T lymphocyte by inhibitory NK receptors. conférences Jaques-Monod : Rho GTPases in the immune system. Roscoff France, May 2003.
5. Asma GATI, Nadia Guerra, Sylvie Da rocha, Bernard Escudier Salem Chouaib and Anne Caignard. Killer inhibitory receptor (CD158) control CTL susceptibility to tumor mediated activation-induced cell death by interfering with Fas signaling. 7th International symposium on molecular basis of predictive oncology intervention strategies. Nice FRANCE, Fevrier 2004.
6. Asma GATI, Nadia Guerra, Salem Chouaib and Anne Caignard. Etude de la réponse immune T spécifique dans les tumeurs rénales : Régulation par les récepteurs NK inhibiteurs NK (KIR.). 5ème congrès scientifique des étudiants d'ILE de France. Paris France, Avril 2002.
7. Asma GATI, Nadia Guerra, Jean Giron-Miche, Bruno Azzarone, Eric Angevin, Alessandro Moretta, Salem Chouaib and Anne Caignard. Etude de la régulation de la fonction inhibitrice des récepteurs inhibiteurs NK (KIR) dans le modèle de lymphocytes T infiltrant les tumeurs rénales. 13èmes journées biologiques de l'Association Tunisienne des Sciences Biologiques. Hammamet Tunisie March 2002.
8. Nadia Guerra, Asma GATI, Salem Chouaib and Anne Caignard. The inhibitory NK receptors inhibit the function of cytotoxic T lymphocytes infiltrating Renal Cell Carcinoma. Second International kidney Cancer symposium. Chicago Illinois USA, Octobre 2001.
9. Asma Gati. Obesity and breast cancer: roles of leptin in tumor development. Beijing CHINA, IUIS 2019.

10. Asma GATI. Obesity and Breast Cancer: The multifactorial role of leptin. 11th African Congress of Immunology-FAIS AFRICA 2021

## Main Supervisor Dissertations

1. **Amal Gorrab.** Role de la leptine dans le développement des tumeurs mammaires. PhD, FST 2020
2. **Nesrine Lajmi.** Etude de l'expression des antigènes de la famille cancer testis et de leur immunogénicité dans le cancer de la prostate. Master of Immunology 2006
3. **Amira Zine El Abidine.** Rôle de l'autophagie dans le développement du cancer du côlon. Master of Immunology 2013
4. **Amal Gorrab.** Rôle des adipocytes dans la progression des tumeurs urologiques. Master of Immunology 2014
5. **Amri Sonia.** Rôle de l'obésité dans le développement de la thyroïdite de Hashimoto. Master of Immunology 2015
6. **Khouloud Ayed.** Obésité et cancer du sein : Implication de la leptine dans la progression tumorale et la chimiorésistance. Master of Immunology 2020
7. **Akrout Rym.** Effet de la spiruline sur la croissance tumorale. Master of Immunology 2020
8. **Amira Zroud.** The study of obesity-related inflammation in Human adipocyte derived cellular models. Master of Immunology 2021
9. **Lamis Nabi.** Obésité et cancer colorectal : effet de la leptine sur la progression tumorale. Master of Immunology 2021
10. **Merizak Hela.** Effect of the prickly pear seeds oil on tumor development Master of Immunology 2021