

# Zeina Hobaika

## List of publications

(as of July 2021)

### Patent

Monoclonal Antibodies against the Human Immunodeficiency Virus Type 1 (HIV-1) Integrase. Maroun R, Femandjian S, Ammar F, El Khoury L, **Hobaika Z**. October 2017

### Publications

Interfacial Water Many-Body Effects Drive Structural Dynamics and Allosteric Interactions in SARS-CoV-2 Main Protease Dimerization Interface. El Ahdab D, Lagardère L, Theo Jaffrelot Inizan, Frédéric Célerse, Chengwen Liu, Olivier Adjoua, 5 Luc-Henri Jolly, Nohad Gresh, **Zeina Hobaika**, Pengyu Ren, Richard G. Maroun and Jean-Philip Piquemal. The journal of Physical Chemistry Letters. (Accepted June 2021).  
<https://doi.org/10.1021/acs.jpcllett.1c01460>

Treatment of dairy waste by anaerobic digestion to produce methane as green energy. El Achkar J.H, Ziade R, Louka N, Maroun R.G, **Hobaika Z**. IEEE 2020 5th International Conference on Renewable Energies for Developing Countries (REDEC)  
DOI: 10.1109/REDEC49234.2020.9163848

Quantum-Chemistry Based Design of Halobenzene Derivatives With Augmented Affinities for the HIV-1 Viral G4/C16 Base-Pair. El Darazi P, El Khoury L, El Hage K, Maroun RG, **Hobaika Z**, Piquemal J-P, Gresh N. 2020. Front. Chem. 8:440. doi: 10.3389/fchem.2020.00440

Reconciling NMR Structures of the HIV-1 Nucleocapsid Protein NCp7 Using Extensive Polarizable Force Field Free-Energy Simulations. El Khoury L, Célerse F, Lagardère L, Jolly L-H, Derat E, **Hobaika Z**, Maroun RG, Ren P, Bouaziz S, Gresh N, Piquemal J-P. 2020. J. Chem. Theory Comput. 16, 4, 2013-2020 DOI 10.1021/acs.jctc.9b01204

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Can coffee grounds be considered as a potential for green energy production? El Achkar J, Baydoun A, Salameh D, Louka N, **Hobaika Z** and Maroun R. Conference: 2018 4th International Conference on Renewable Energies for Developing Countries (REDEC), November 2018, DOI: 10.1109/REDEC.2018.8598105

Anaerobic digestion of grape pomace: Effect of the hydraulic retention time on process performance and fibers degradability. El Achkar JH, Lendormi T, Salameh D, Louka N, Maroun R, Lanoisellé JL, and **Hobaika Z**. Waste Management. 2017 Vol 71: 137-146. Doi: 10.1016/j.wasman.2017.11.005

Influence of several pretreatment conditions on lignocellulosic fractions and methane production from grape pomace. El Achkar JL, Lendormi T, Salameh D, Louka N, Maroun RG, Lanoisellé JL and **Hobaika Z**. Bioresource Technology. 2018 Vol 247: 881–889. Doi: 10.1016/j.biortech.2017.09.182

Anaerobic digestion of nine varieties of grape pomace: correlation between biochemical composition and methane production. El Achkar J, Lendormi T, **Hobaika Z**, Salameh D, Louka N, Maroun RG and Lanoisellé JL. Biomass and Bioenergy. 2017 Vol 107: 335-344. Doi: 10.1016/j.biombioe.2017.10.030

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- A Comparative Study of the Phenolic and Technological Maturities of Red Grapes Grown in Lebanon. Rajha HN, El Darra N, El Kantar S, **Hobaika Z**, Louka N and Maroun RG. *Antioxidants (Basel)*. 2017 Jan 26;6(1). pii: E8. doi: 10.3390/antiox6010008
- Anaerobic digestion of grape pomace: biochemical characterization of the fractions and methane production in batch and continuous digesters. El Achkar J, Lendormi T, **Hobaika Z**, Salameh D, Louka N, Maroun RG and Lanoisellé JL. *Waste Management*. 2016 Apr;50:275-82. doi: 10.1016/j.wasman.2016.02.028
- Study of the inhibition mechanism of HIV-1 integrase by diketoacids molecules. El Khoury L, **Hobaika Z**, El Hage K, Femandjian S, Piquemal JP, Gresh N and Maroun RG. *Journal of Virus Eradication* 2016; 2 (Supplement 1): 8–1
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- Effect of the Drying Process on the Intensification of Phenolic Compounds Recovery from Grape Pomace Using Accelerated Solvent Extraction. Rajha H, Ziegler W, Louka N, **Hobaika Z**, Vorobiev E, Boechzelt HG and Maroun RG. *International Journal of Molecular Sciences*. 2014, 15(10), 18640-18658, doi :10.3390/ijms151018640
- Multiple Response Optimization of High Temperature, Low Time Aqueous Extraction Process of Phenolic Compounds from Grape Byproducts. Rajha H, Louka N, El Darra N, **Hobaika Z**, Boussetta N, Vorobiev E and Maroun RG. *Food and Nutrition Sciences*. 2014, 5, 351-360, doi: 10.4236/fns.2014.54042

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Monoclonal antibodies that recognize important functional elements of the HIV-1 integrase enzyme. Maroun RG, Ammar F, **Hobaika Z**, Zargarian L, Fermandjian S. Retrovirology. 2012, 9 (Suppl 1): P6.

HIV-1 integrase and virus and cell DNAs: complex formation and perturbation by inhibitors of integration. **Hobaika Z**, Zargarian L, Maroun RG, Mauffret O, Burke Jr. TR and Fermandjian S. Neurochemical Research. 2010 Jun; 35(6):888-93. doi: 10.1007/s11064-009-0098-2

Specificity of LTR DNA Recognition by a Peptide Mimicking the HIV-1 Integrase  $\alpha$ 4 Helix. **Hobaika Z**, Zargarian L, Boulard Y, Maroun RG, Mauffret O and Fermandjian S. Nucleic Acids Research. 2009 Dec;37(22):7691-700. doi: 10.1093/nar/gkp824

An Unusual Helix Turn Helix Motif in the Catalytic Core of HIV-1 Integrase Binds Viral DNA and LEDGF. Merad H, Porumb H, Zargarian L, Rene´ B, **Hobaika Z**, Maroun RG, Mauffret O and Fermandjian S. PLOS ONE. 2009 4(1), e4081. doi: 10.1371/journal.pone.0004081  
Communications in National and International Conferences

#### Posters:

Study of Therapeutic Inhibitor Complexes Targeting Metalloproteins: application to HIV-1 integrase. El Darazi P, Francis J, Tabet Y, El Khoury L, Piquemal JP, Gresh N, Maroun RG and **Hobaika Z**. 9ème journée de la recherche, 2018, Université Saint-Joseph de Beyrouth, Lebanon

Anaerobic digestion of grape pomace: effect of alkaline pretreatment on methane production in batch and continuous digesters. El Achkar JH, Lendormi T, **Hobaika Z**, Sabourin C, Salameh D, Louka N, Maroun RG and Lanoisellé JL. Aridotech V Meeting International : Biotechnologie Végétale En Zones Arides Et Oasiennes, 2016, Djerba, Tunisie

Polarizable Molecular Dynamics Simulations of the Viral HIV-1 Nucleocapsid Protein. El Khoury L, Lagardère L, Narth C, **Hobaika Z**, Maroun R, Gresh N and Piquemal JP. RCTF Conference, 2016, Université Lyon1, France

Caractérisation préliminaire de la méthanisation de marc de raisin en perspective d'une implantation dans la plaine de la Bekaa au Liban. El Achkar J, Lendormi T, Chamaa MA, **Hobaika Z**, Salameh D, Louka N, Maroun RG and Lanoisellé JL. Journées Recherche Industrie biogaz méthanisation, 2015, Rennes, France

Characterization of the inhibition of HIV-1 integrase by anti  $\alpha 4$  helix monoclonal antibodies. Ammar F, Chebaro N, **Hobaika Z**, Zargarian L, Mauffret O, Fermandjian S and Maroun RG. "Anti-HIV Therapies School", 2011, Marseille, France

Mechanism of action of DKAs, inhibitors of HIV-1 integration. **Hobaika Z**, Zargarian L, Mauffret O and Fermandjian S. 14èmes Rencontres Doctorales des Universités Paris6-Paris7, 2007, Paris, France

## Oral Communications

Conception et évaluation par dynamique moléculaire de nouveaux inhibiteurs halogénés ciblant l'intégrase du VIH-1 : vers une inhibition plus efficace. El Darazi P, El Khoury L, Piquemal JP, Gresh N, Maroun RG and **Hobaika Z**. Les conférences de la recherche, June 2021, Université Saint-Joseph de Beyrouth, Liban

Etude de la dynamique structurale et des interactions allostériques au niveau de l'interface de dimérisation de la protéase principale du SARS-CoV-2. El Ahdab D, Lagardere L, Gresh N, **Hobaika Z**, Piquemal JP and Maroun RG. Les conférences de la recherche, June 2021, Université Saint-Joseph de Beyrouth, Liban

Anaerobic Digestion as a source of Bioenergy: Towards Sustainable Development Solutions. **Hobaika Z**, El Achkar J, Lendormi T, Salameh D, Louka N, Lanoisellé J-L and Maroun RG. Smart and Sustainable Cities: Towards Sustainable Development Solutions. American University of Ras Al Khaimah, RAK, UAE, November 2019

Agro-industrial Byproducts and Waste Valorization: Towards sustainable bioenergy approaches. **Hobaika Z**, El Achkar J, Lendormi T, Salameh D, Louka N, Lanoisellé J-L and Maroun

R. The 4th ISANH Middle East Redox & Microbiota 2019 World Congress, March 2019, Muscat, Oman

Olive pomace, a source of green energy using anaerobic digestion. El Achkar J, Rohayem C, Salameh D, Louka N, Maroun R and **Hobaika Z**. Conference: 2018 4th International Conference on Renewable Energies for Developing Countries (REDEC), November 2018, Beirut, Lebanon

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Smart Sustainable Cities: Towards Sustainable Bioenergy Approaches. **Hobaika Z**, El Achkar J, Lendormi T, Salameh D, Louka N, Lanoisellé J-L and Maroun R. Smart and Sustainable Cities: Between Reality and Aspiration. University Mohamed V, Rabat, Morocco, October 2018

Phenolic compounds in food waste valorization: figures and perspectives. Maroun R, Rajha H, Chakar S, **Hobaika Z** and Louka N, 12th World Congress on Polyphenols Applications, September 2018, University of Bonn, Germany

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Caractérisation de complexes d'inhibiteurs à visée thérapeutique : application à l'intégrase du VIH-1. **Hobaika Z**, El Darazi P, Francis J, El Khoury L, Piquemal JP, Gresh N and Maroun RG. 9ème journée de la recherche, June 2018, Université Saint-Joseph de Beyrouth, Liban

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Modeling novel suggested structures of inhibitory complexes of HIV-1 integrase. El Darazi P, Francis J, El Khoury L, Piquemal JP, Gresh N, Maroun RG and **Hobaika Z**. The 24th International Scientific Conference, LAAS 24, 2018, Balamand University, Koura, Lebanon

- Valorization of Industrial By-products: Assessing the impact of polyphenols on biogas production, using grape pomace. **Hobaika Z**, El Achkar JH, Lendormi T, Salameh D, Louka N, Lanoisellé JL and Maroun R. 18th ISANH Middle East World Congress, Beirut Antioxidants 2017, Beirut, Lebanon. Journal of International Society of Antioxidants in Health & Nutrition (JISANH)-Volume 4- Issue 1, 2017 doi: 10.18143/JISANH\_v4i1
- Food Waste Valorization: Phenolic Compounds Extraction and Applications. Maroun RG, Rajha RN, Al DARRA N, **Hobaika Z**, and Louka N. 18th ISANH Middle East World Congress, Beirut Antioxidants 2017, Beirut, Lebanon, Journal of International Society of Antioxidants in Health & Nutrition (JISANH)-Volume 4- Issue 1, 2017 doi: 10.18143/JISANH\_v4i1
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- Vine Shoots Green Valorization: Phenolic Compounds Extraction Using Green Solvents. **Hobaika Z**, Tenkerian P, Rajha HN, Louka N and Maroun RG. 16th ISANH Middle East Antioxidants World Congress, 2016, Dubai UAE, DOI: 10.18143/JISANH\_v3i1\_938
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- Chemical characteristics and methane potential of different varieties of grape pomace under a wide range of environmental conditions. El Achkar J, Lendormi T, **Hobaika Z**, Salameh D, Louka N, Maroun RG and Lanoisellé JL. ECCE0+ECAB3+EPIC5 Chemical Engineering and Biochemical Engineering for a new sustainable process industry in Europe, 2015, Nice, France
- Optimization of polyphenol extraction from vine shoots and grape pomace. Rajha H, Boussetta N, **Hobaika Z**, Louka N, Vorobiev E and Maroun RG. 9th World Congress on Polyphenols Applications, 2015, St Julian's, Malta
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