

# HEND LETAIEF, Ph.D

Fresno State  
Department of Viticulture & Enology  
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## SUMMARY OF SKILLS

- Project implementation and management
- Grant proposals and scientific writing
- Industry collaborations
- Technical service experience
- Research and application development
- Chemical, sensory and texture analysis expertise.
- Food science and chemistry background
- Wine and fruit phenolic expertise.
- Teaching and oral communication
- Multicultural and interdisciplinary experience

## EDUCATION

### **PhD, Food Science and Technology, University of Turin, Italy** 2007

Dissertation title “Application of chemical-physical and mechanical tests for the definition of wine grape quality”

- Attended and presented at several national and international conferences in Italy, France and Hungary
- Assisted in the preparation and teaching of the Varietal Enology Course

### **MSc, Viticulture & Enology and Winemaker Degree, Montpellier SupAgro, France** 2004

- Completed graduate level course in Viticulture, Enology, Vine and Wine Economics, Management and Marketing.
- Completed Professional internships: winemaking, post-fermentation treatments, vineyard management practices
- Completed a Research Thesis entitled: Control of the micro-oxygenation process through the analysis of the acetaldehyde content. Project conducted at DIVAPRA, Turin, Italy

### **BS, Food Engineering, Higher Institute of Food Industries of Tunisia (ESIAT)** 2002

- Completed Fundamental Sciences and Food Engineering courses.
  - Main subjects: chemistry, biochemistry, microbiology, statistics, economics, materials sciences, Food Technologies, sensory analysis, biotechnology, food conservation techniques
- Completed Professional internships:
  - *Huilerie Najjar – Tunisia – 2001*: Olive oil production
  - *Cave Coopérative Viticole de Bouargoub – Tunisia – 2001* : Winemaking
  - *Nestlé Tunisia – 2001*: Analysis of Nescafé packaging loss
  - *GIPA Tunisia –2000*: Internship in Dairy industrial Plant environment
- Completed a Research Thesis at *Centre Wallone de Biologie Industrielle, Liege, Belgium*

Thesis title: How to produce good vinegars by using bad quality Tunisian wines..

## **EMPLOYMENT HISTORY**

- **Assistant Professor at *Department of Viticulture & Enology, Fresno State*** *2013 – Current*
  - Tenure track position
  - Responsible for increasing the stature of research program in grape and wine chemistry including cooperative enology and viticulture research.
  - Participated in the enology teaching program and advised/supervised graduate student research
  - Participated in departmental, college and university service and outreach activities.
  - In consultation with other faculty and industry partners, determined research direction and ensured that goals and objectives were in line with industry needs.
  - Managed dissemination of new knowledge to both industry partners and peer-reviewed journals.
  - Current research projects include:
    - Grape texture and phenolic composition: impact on wine phenolics, color and mouthfeel
    - Oak alternatives and effect on wine anthocyanin composition.
  
- **Assistant Professor at *Higher Institute of Food Industries of Tunisia (ESIAT)*** *2009-2013*
  - Tenure position.
  - Responsible for developing and maintaining a rigorous research program in the Tunisian beverage industry.
  - Worked closely with wine industry, breweries, juice industries and research institutes
  - Collaborated with other faculty and research scientists from different disciplines.
  - Taught undergraduate and graduate-level courses in enology and sensory analysis and supervised student research projects.
  - Research projects conducted:
    - Effect of temperature and light exposure on the sensory profile and chemical composition of Muscat of Alexandria dry wines.
    - Development of a juice from cactus cladodes, composition and consumer appreciation.
    - Sensory profiling and consumer appreciation of Tunisian Cabernet sauvignon wines grown in different regions.
    - Assessment of the alcoholic beverages preferences of the Tunisian consumer.
    - Nutritional value and antioxidant properties of blood orange “*Maltaise demi-sanguine*”, organically and conventionally farmed.
    - Cactus fruit composition, nutritional value and antioxidant properties.
    - Nutritional value and antioxidant properties of grape seed oil and skin extracted from winery byproducts.
  
- **Scientific Translator at *VINIDEA, Infowine*** *2009-2014*
  - Translated scientific and technical documents in viticulture and enology from Italian to French and from English to French.
  
- **Lecturer at *National Institute of Agronomy of Tunisia (INAT)*** *2013*
  - Taught an undergraduate level course in enology.
  
- **Lecturer at *Institute of Health Science of Tunisia (ESSTST)*** *2012*
  - Taught an undergraduate level course in enology.

- **Marketing Manager at *Les Vignerons de Carthage, Tunisia*** 2009
  - Wine Industry marketing position.
  - Managed a wide range of marketing processes and projects.
  - Interacted with sales, program managers, editorial departments and legal and finance entities.
  - Hosted events and organized tours.
- **Postdoctoral researcher at Laboratoire GRAPPE, ESA d'Angers, France** 2008
  - Applied compression tests and sensory analysis for the definition of the grape quality during maturation.
  - Assisted in the organization of the In Vino Analytica Scientia, congress, Angers 2008.
  - Taught summer program courses about the technologies of wine making and cheese making in France.
- **Assistant Winemaker at Bragagnolo Vini Passiti, Italy** 2007
  - Co-managed operations related to the production of dessert wines and red wines.
  - Hosted events and organized tours.

### **INTERNSHIPS**

- **Research internship at The University of Adelaide, Australia** 2006
  - Optimization of grape skin and seeds phenolic extraction
  - Characterization of grape and wine phenolics by HPLC
  - Characterization of grape and wine tannin composition by Gel Permeation Chromatography.
- **Winemaking and Viticulture internship at Casa Vinicola Triacca, Italy** 2004
  - Assisted in all cellar operations following alcoholic fermentation including barrel aging fining, stabilization, filtration, blending and bottling.
  - Participated in vineyard management operations such as pruning, leaf removal and cluster thinning.
  - Conducted grape and wine chemical analysis.
- **Winemaking internship at Antica Contea di Castelfero, Italy** 2003
  - Assisted in all winemaking operations: harvest, red and white wine fermentation, sanitation, cup and press management.
- **Engineering internship at Nestle, Tunisia** 2001
  - Assessed the causes of Nescafe package losses during the packaging process.

### **TEACHING EXPERIENCE**

Undergraduate and graduate-level courses:

- |   |                      |
|---|----------------------|
| • Grape and wine chemistry                | • Sensory Analysis   |
| • Analytical methods for grapes and wines | • Brewery            |
| • Wine Production                         | • Vinegar production |

### **PROFESSIONAL ACTIVITIES AND SERVICES**

- Chair of the Research and Scholarly Activities Committee, Jordan College of Agricultural Sciences and Technology, CSU Fresno – 2015 – current

- Member of the Academic Program Committee, Jordan College of Agricultural Sciences and Technology, CSU Fresno – 2013 – 2015
- Graduate Scholarship/Awards Committee, CSU Fresno – 2014 - current
- New Faculty Search Committee, Viticulture position – 2013
- Vinifera International Master Search Committee – 2012 – current
- Vintage International Master partner – 2012 – current
- Advisor – Enology Society – 2013 – current
- Member of Wine Science Forum advisory board – 2013 - current
- Reviewer for American Journal of Enology and Viticulture
- Reviewer for Journal of Agricultural and Food Chemistry
- Reviewer for Journal of Food Science
- Co-Editor and Reviewer for Wine Studies
- Reviewer for CRC Press
- Established partnerships between universities: Fresno State, Montpellier SupAgro, FESIA
- Established partnerships with industry and research centers.
- Involved in the development of professional Masters.

### **FUNDED RESEARCH PROJECTS**

- Project Title: Tannin Structure-Activity & Astringency; funding sources: American Vineyard Foundation (AVF).
- Project Title: Tannin Polysacchride Interaction; funding sources: AVF
- Project Title: Tannins in red wine; funding sources: CSU Agricultural Research Institute (ARI)
- Project Title: Tannin extractability; funding sources: AVF and ARI
- Project Title: Polysaccharides in red wine; funding sources: ARI
- Project Title: Development of instrumentation for assessing grape texture and its relationship to wine composition and perception; funding sources: ARI, Jordan College of Agricultural Science and Technology JCAST.
- Project Title: Oxygen management during bottling; funding source: Nomacorc
- Project Title: “Divin” Valorization of autochthonous mediterranean wine grape varieties; funding source: European Union.

### **SCHOLARSHIPS**

- Pays de Loire region Scholarship: 2008
- Italian Government Scholarship: 2004-2007
- Tunisian Government Scholarship: 2002-2004
- Centre Wallon de Biologie Industrielle Scholarship: 2002

### **PUBLICATIONS**

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|-------------------------------------|--------------------------|
| • Books and book chapters: 2        | • Oral presentations: 12 |
| • Peer-Reviewed publications: 6     | • Posters: 8             |
| • Non Peer-reviewed publications: 8 |                          |

### **Books and Book Chapters**

- Letaief H, Texture analysis for the definition of wine grape quality. AV Akademikerverlag GmbH & Co. KG. 2014.

- Bordiga et al. Wine making Process In Valorization of Wine Making By-Products. CRC Press. 2015.

### Peer-Reviewed Publications

- Letaief H, Zemni H, Mliki A, Chebil S (2016) Composition of Citrus sinensis (L.) Osbeck cv «Maltaise demi-sanguine» juice. A comparison between organic and conventional farming, Food Chemistry. 194, 290-295. (Impact Factor: 3.391)
- Letaief H, Kurtural K, Caillieaudeaux R, Watrelot A.A, Kennedy J.A. (2015) Berry texture and its importance in wine composition. Journal of Agricultural and Food Chemistry (second review).
- Letaief H, Maury C, Symoneaux R, Siret R (2013) Sensory and instrumental texture measurements for assessing grape seed parameters during fruit development, Journal of the Science of Food and Agriculture. 93 (10), 2531–2540. (Impact Factor : 1.714)
- Letaief H, Rolle L, Gerbi V (2008) Mechanical behavior of wine grapes under compression tests. American Journal of Enology and Viticulture. 59 (3), 323-329. (Impact Factor : 1.171)
- Letaief H, Rolle L, Zeppa G, Gerbi V (2008) Assessment of grape skin hardness by a puncture test. Journal of the Science of Food and Agriculture. 88, 1567-1575. (Impact Factor: 1.714)
- Letaief H, Rolle L, Zeppa G, Orriols I, Gerbi V (2007) Phenolic characterization of grapevine varieties from Galicia (Spain) : Brancellao, Merenzao and Mencia (*Vitis vinifera* L.). Italian Journal of Food Science. 19 (1), 111-119. (Impact Factor: 0.2)

### Non Peer-Reviewed Publications

- Letaief H (2014) Exploring a new technique for grape measurements : Instrumental Texture Analysis. The Catch Wire. 2 (1), 24-25.
- Maury C, Siret R, Letaief H, Symoneaux R, Jourjon F (2008) Un nouvel indicateur pour définir le potentiel œnologique des raisins: La Maturite Texturale. Revue Suisse Vitic. Arboric. Hortic. 40 (6), 359-364.
- Rolle L, Zeppa G, Letaief H, Gerbi V. (2007) Phenolic characteristics and wine quality of autochthonous grapevine variety Brunetta di Rivoli (*Vitis vinifera* L.): promotion of the sustainable use of local biodiversity. In Macromolecules and secondary Metabolites of Grapevine and Wines, edited by Jeanden P., Clément C., Conreux A. Editions TEC&DOC, Lavoisier, Paris, 281-285. ISBN 978-2-7430-0965-6.
- Rolle L, Zeppa G, Letaief H, Ghirardello D, and Gerbi V (2007) Methods for the study of the mechanical properties of the wine grape. Riv. Vitic. Enol. 2:59-71.
- Gerbi V, Letaief H, Zeppa G, Rolle L (2006) Caratterizzazione del profilo antocianico di vitigni liguri. In Ricerche e innovazioni nell'industria alimentare, Vol. 7, a cura di S. Porretta, Chiriotti Editori, Pinerolo (TO), 508-511. ISBN 88-85022-96-0.
- Rolle L, Letaief H, Cagnasso E, Ghirardello D, Zeppa G, Gerbi V (2006) Studio delle proprietà meccaniche di uve Nebbiolo coltivate in ambienti diversi. Quad. Vitic. Enol. Univ. Torino, 28, 185-194.
- Rolle L, Zeppa G, Letaief H, Gerbi V (2006) Un approccio innovativo nella valutazione della qualità dell'uva da vino: la texture analysis. In VitEnda 2007, 266-267. Ed.Vit. En., Calosso (AT). ISBN 88-86055-15-3.
- Rolle L, Letaief H, Cagnasso E, Zeppa G, Gerbi V (2006) Studio delle proprietà meccaniche di uve Nebbiolo coltivate in ambienti diversi. Quad. Vitic. Enol. Univ. Torino, 28, 185-194.

### Oral Presentations

- Letaief H, Variation in Total Package Oxygen during bottling: importance of headspace oxygen. Wines & Vines Packaging Conference. August 19, 2015.
- Letaief H,
- Letaief H, Wine Science Forum.
- Letaief H, Skin phenolics and texture of wine grapes in Napa Valley, 2014 Vintage report, Napa, USA, January 20, Napa 2015.

- Letaief H, Effect of different leaf removal and irrigation treatments on grape texture and relationship with anthocyanins concentrations in grapes and wines, Bronco Wine Company research review, Fresno, USA, November 8, 2014
- Letaief H, Prediction of the ideal harvest date by measuring seed texture, Grape Day, Fresno, USA, August 5, 2014.
- Letaief H, Development of a new analytical method for assessing grape texture and relationship to wine composition and quality. E & J Gallo technical seminar, Modesto, USA, April 21, 2014
- Letaief H, Impact of bottling on wine quality. Wine science forum, Napa, USA, February 26, 2014
- Letaief H, Winemaking in the Mediterranean. Viticulture and Enology Fall Seminar Series, Fresno, USA, October 2, 2013
- Zouid I, Siret R, Letaief H, Maury C, Jourjon. Variation de la texture du raisin Cabernet Franc au cours de la maturation. OIV Congress , Verona, Italy, June 15-20, 2008.
- Le Moigne M, Maury C, Letaief H, Siret R, Jourjon F. Intérêt de la maturité texturale des raisins comme nouvel indicateur de caractérisation des raisins issus de différents terroirs, Application au Cabernet Franc en Vallée de la Loire. VIIth International Congress of Vitivinicultural Terroirs, Nyon, Switzerland, May 19-23, 2008.
- Rolle L, Letaief H, Gerbi V. Valutazione delle proprietà meccaniche delle uve per una corretta gestione della macerazione. Il Futuro del Vino, Sondrio, Italy, May 11, 2007.
- Rolle, Letaief H, Gerbi V. The application of texture analysis for evaluation of the wine grape quality. XXXth OIV World Congress of Vine and Wine, Hungary, Budapest, June 10-16, 2007.
- Letaief H, Rolle L, Zeppa G, Gerbi V. Grape skin and seeds hardness assessment by texture analysis. IUFoST 13th World Congress of Food Science & Technology. Food is Life, Nantes, France, September 17-21, 2006.

### **Posters**

- Letaief H, Yu C, Cook M, Watrelot A, Kurtural K. Leaf removal and deficit irrigation effect on grape texture and phenolic composition. 2015 National Conference-American Society of Enology and Viticulture. Portland, June 15–18, 2015.
- Selmi A, Letaief H, Zemni H, Chebil S, Hassouna M. Dietary juice from prickly pear cladodes, comparison between two varieties and improvement of the juice sensory quality. Premières Journées Scientifiques de l'Agro-alimentaire, Sousse, Tunisia, May 24-26, 2013
- Rolle L, Letaief H, Zeppa G, Gerbi V. Evoluzione delle proprietà meccaniche dei vinaccioli durante la maturazione delle uve. Atti 8° CISETA, Rho, Italy, May 7-8, 2007.
- Rolle L, Letaief H, Gerbi V, Zeppa G, Mannini F. Valutazione dell'effetto del virus GLRAV-3 sulle proprietà meccaniche delle uve. Enoforum– Innovazione ed eccellenza, Italy, Piacenza, March 13-15, 2007.
- Letaief H. The impact of grape chemical and physical properties on the wine process planning. XIth Workshop on the Developments in the Italian PhD Research on Food Science and Technology, Mosciano Sant' Angelo, Italy, September 27-29, 2006.
- Rolle L, Letaief H, Zeppa G, Gerbi V. Texture characteristics appraisal of mountainous Nebbiolo grapes. Premier Congrès International sur la viticulture de montagne et en forte pente, Saint-Vincent, Italy, March 17-18, 2006.
- Gerbi V, Letaief H, Zeppa G, Rolle L. Caratterizzazione del profilo antocianico di vitigni liguri. 7° CISETA. Cernobbio, Italy, September 19-21, 2005.
- Gerbi V, Rolle L, Letaief H, Guidoni S, Schneider A, Zeppa G. Phenolic characterization of Piedmont mountain grapevine varieties. In *Vino Analytica Scientia*, Montpellier July 7-9, 2005.

### **LANGUAGES**

- English: fluent

- French: fluent
- Arabic: native
- Italian: fluent
- Spanish: basic