

CURRICULUM VITAE

Sinan Cem EMEK

Greenleaf Medical Science Center

Medicon Village

Scheelevägen 8, Byggnad 403

223 81 Lund

+46 735054945

PROFESSIONAL PROFILE:

- **Extensive experience with enzymology-enzyme kinetic:** Inhibition of lipase/colipase and gastric lipase by biological membrane and membrane proteins. Binding of lipases to biological membranes. pH-stat titration.
- **Extensive experience with protein purification and characterization techniques:** HPLC, FPLC, size exclusion, ion-exchange and affinity chromatography. Spectroscopic techniques (UV, fluorescence spectroscopy, CD, nanodrop, dynamic light scattering), aqueous two-phase systems.
- **Running native and denaturing gel-electrophoresis:** SDS-PAGE, blue native gels, 2D-gels, isoelectric focusing, and agarose gel-electrophoresis.
- **Purification of biological membranes:** Laboratory and large scale purification of thylakoid membranes as functional food; inhibition on the activity of lipase/colipase
- **Proteomics:** Protein and peptide analysis using MALDI-TOF, LC-MS.
- **Molecular Biology:** Experience with molecular sub-cloning of a protein, western blotting, nucleic acid purification, electrophoresis, polymerase chain reaction (PCR), mutagenesis, cell fractionation, ELISA.
- **Food Technology:** Experience with Freeze drying and spray drying techniques. Homogenization and emulsion techniques of biological membranes as food additives. Digestion of proteins in gastrointestinal track.

WORK EXPERIENCE:

- **GLM-Science Center Director, Lund** 2014/01-ongoing
- **Scientific Advisor, GreenLeaf Medical-Stockholm,** 2010/12-2013/12
- **Research Scientist-Postdoc, Centre for Molecular Protein Science, Lund University, Lund. Working with bioactive peptides, lipolysis, enzyme kinetic and food technology.** 2010/12- ongoing
- **Research assistant-PhD-student, Department of Biochemistry, Lund University, Lund.** 2006/04 – 2010/12
*Expression, purification and characterization of violaxanthin de-epoxidase (VDE).
Effect of biological membranes and membrane proteins on the activity of lipase/colipase system.*
- **Project employment, Experimental Brain Research at the Wallenberg Neuroscience Center, Lund University, Lund.** 2000/08 –2001/01
Immunohistochemical analysis of ischemia disease.

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DEGREES & EDUCATION:

- **PhD in Biochemistry**, Lund University, Lund 2006/04-2010/10
Title: “*Thylakoid Membranes and Pancreatic Lipase/Colipase*”
- **M.Sc. in Biochemistry**, Lund University, Lund, Sweden 2003/09-2006/02

INTERNATIONAL CONFERENCES:

- **Supply Side West 2013**, Las Vegas, USA, November 12-16, 2013
- **Annual Symposium of The Protein Society USA**, Boston, MA, USA, July 20–23, 2013
- **ExpoWest-2013**, Natural products. Research product was awarded “the best new ingredient”, Anaheim, Ca-USA, 2013/03 and 2014/03
- **Keystone Symposia**, Bioactive Lipids: Biochemistry and Diseases, Poster Presentation, Kyoto, Japan, 2010/06
- **The American Society of Plant Biologist and The Phycological Society of America**, Poster Presentation, Honolulu Hawaii-USA, 2009/07
- **Gordon Research Conference**, Agricultural Biotechnology, Poster Presentation, Ventura California-USA, 2007/03
- **Methods for Studying the Role of Oxidants and Antioxidants in Plants**, Food, Man and Animals, Poster Presentation, Kiel-Germany, 2006/07

LANGUAGE SKILLS (WRITING/VERBALLY):

English

Advanced

Swedish

Advanced

Turkish

Advanced

ACADEMIC AWARDS:

- Research-scholarship from “Stiftelsen Sven och Lilly Lawskis Fond” – Sweden, 2006/04/20 – 2007/10/20
- Research foundation from “Kungl. Fysiografiska Sällskapet” i Lund-Sweden, 2007, -09, -11, -13

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TEACHING AND LEADERSHIP IN RESEARCH

- Protein chemistry (Protein separation techniques)
- Chemistry in the Cell (Expression, purification and characterization of ferredoxin-NADP oxidoreductase)
- Biotechnology (ELISA, different spectroscopy techniques, PCR, gel-electrophoresis)
- Supervision of six master-research students
- Doctoral student union delegate 2006-2008
- Member of The Swedish Chemical Society and The Swedish Association of Scientists
- Member of The Protein Society of USA

PUBLICATIONS

1. *Barrier properties of heat treated starch Pickering emulsions.* Malin S, Emek SC, Hall T, Rayner M, Wahlgren M. ***Journal of Colloid and Interface Science, accepted 2015.***
2. *Photocurrent generation from thylakoid membranes on osmium redox polymers modified electrodes.* Hamidi H, Hasan K, Emek SC, Dilgin Y, Åkerlund HE, Albertsson PÅ, Leech D, Gorton L. ***ChemSusChem, accepted 2015.***
3. *The effect of heat treatment of thylakoids on their ability to inhibit in vitro lipase/co-lipase activity.* Ostbring K, Rayner M, Sjöholm I, Otterstrom J, Albertsson PA, Emek, SC, Erlanson-Albertsson C. ***Food&Function, 2014.***
4. *Photo-electrochemical communication between thylakoid membranes and gold electrode via different quinone derivatives.* Hasan K, Dilgin Y, Emek SC, Tavahodi M, Åkerlund HE, Albertsson PÅ, Gorton L. ***Chemelectrochem, 2014.***
5. *Pancreatic lipase-colipase binds strongly to the thylakoid membrane surface.* Emek SC, Åkerlund HE, Erlanson-Albertsson C and Albertsson PÅ. ***Journal of the Science of Food and Agriculture, 2013.***
6. *Thylakoids Promote Satiety in Healthy Humans. Metabolic Effects and Mechanisms.* Erlanson-Albertsson C, Albertsson PÅ, Gustafsson K, Montelius C, Emek SC, Köhnke R and Landin-Olsson M. **Emerging trends in dietary components for preventing and combating disease** book Series: ACS Symposium Series Volume: 1093 Pages: 521-531 Published: 2012

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7. *Pigments protect the light harvesting proteins of chloroplast thylakoid membranes against digestion by gastro-intestinal protease.* Emek SC, Åkerlund HE, Clausén M, Ohlsson L, Weström B, Erlanson-Albertsson C, Albertsson PÅ. ***Food Hydrocolloids, 2011.***
8. *Chloroplast thylakoids reduce glucose uptake and decrease intestinal macromolecular permeability.* Gustafsson K, Montelius C, Weström B, Albertsson PÅ, Emek SC, Rayner M, Erlanson-Albertsson C. ***British Journal of Nutrition, 2011.***
9. *Chloroplast thylakoid membrane-stabilised emulsions.* Rayner M, Ljusberg H, Emek SC, Sellman E, Erlanson-Albertsson C, Albertsson PÅ. ***Journal of the Science of Food and Agriculture, 2010.***
10. *Post-harvest improvement of zeaxanthin content of vegetables.* Clausén M, Huang S, Emek SC, Sjöholm I & Åkerlund HE. ***Journal of Food Engineering, 2010.***
11. *A large scale method for preparation of plant thylakoids for use in body weight regulation.* Emek SC, Szilagy A, Åkerlund HE, Albertsson PÅ, Köhnke R, Holm A, Erlanson-Albertsson C. ***Prep. Biochemistry and Biotech. , 2010.***
12. *Thylakoids suppress appetite by increasing cholecystokinin resulting in lower food intake and body weight in high-fat fed mice.* Köhnke R, Lindqvist A, Göransson N, Emek SC, Albertsson PÅ, Rehfeld JF, Hultgårdh-Nilsson A, Erlanson-Albertsson C. ***Phytotherap Res., 2009.***
13. *Thylakoids promote release of satiety hormone cholecystokinin while reducing Insulin in healthy humans.* Köhnke R, Lindbo A, Larsson T, Lindqvist A, Rayner M, Emek SC, Albertsson PÅ, Rehfeld JF, Landin-Olsson M, Erlanson-Albertsson C. ***Scandinavian Journal of Gastroenterology, 2009.***
14. *Chloroplast membranes retard fat digestion and induce satiety: effect of biological membranes on pancreatic lipase/co-lipase.* Albertsson PÅ, Köhnke R, Emek SC, Mei J, Rehfeld JF, Åkerlund HE, Erlanson-Albertsson C. ***Biochemical Journal, 2007.***