

Introduction to Spherix Consulting Group, Inc.

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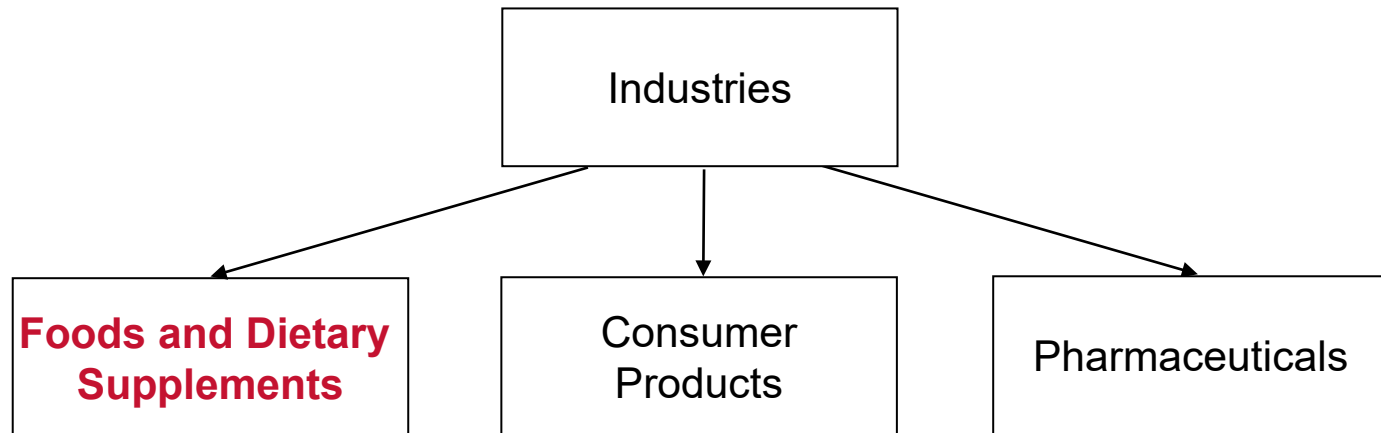
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A Full Complement of Services to Support the Food and Drug Industry

- **Regulatory Support**
 - Safety evaluation
 - Product approval
 - Claim evaluation and substantiation
- **Pre-Clinical/Clinical Study**
 - Design, placement, and oversight
 - Report writing and publication
- **Product Stewardship**
 - Risk assessment, management and communication

Industry Sectors We Serve



Food Industry Services

- **Foods**
 - Generally Recognized As Safe (GRAS)
 - New Dietary Ingredient Notifications (NDIN)
 - Food Additive Petitions
 - Novel Food Dossier
 - Health Claim and Structure/Function Claim Substantiation
 - USDA Petitions
- **Food Contact Substances (Notification)**
- **Animal Feed (GRAS Notifications, Food Additive Petitions, and AAFCO Submissions)**

Our Staff Can Assist with Safety Assessments and Regulatory Submissions Worldwide

- **United States:**

- GRAS Notifications to FDA

(<https://www.cfsanappsexternal.fda.gov/scripts/fdcc/?set=GRASNotices>):

- GRN# 44, 67, 77, 78, 94, 118, 119, 130, 140, 164, 196, 233, 236, 268, 275, 326, 334, 453, 454, 455, 464, 465, 496, 576, 635, 652, 721, 800, 877, 896, 919, 921, 922, 923, 925, 934, 986, 1002, 1003, 1008, 1014, 1015, 1016, 1017, 1039

- GRAS Self-Determinations ► 70+

- Citizen Petition (GRAS dossier for plant stanol esters)

- USDA submissions for antimicrobial use: lauramide arginine ethyl ester (also GRAS 164) and lactoferrin (also GRAS 130)

- Food Additive approval for glycerol ester of gum rosin (21 CFR 172.735)

- New Dietary Ingredients: probiotics, polyphenolic extracts, sports nutrition aids, vitamins

- NDIN# 659, 882, 993, 1062, 1104, 1143

Our Staff Can Assist with Safety Assessments and Regulatory Submissions Worldwide

- **International:**

- Food Additive submissions to Canada, European Union, Asia, Latin America, and Africa
- Novel Food submissions and Substantial Equivalence notifications to the European Union, Canada, Australia, and Brazil
- Natural Health Product submissions to Canada
- Complementary Medicines submissions to Australia
- Submission to JECFA

Diverse Product Experience

- **We have experience with ingredients having complex chemistries, including:**
 - Complex carbohydrates and sweeteners
 - Galacto-oligosaccharides
 - Tagatose; Stevia
 - Dietary fibers
 - Isolates from *Euglena sp.*
 - Lipid-containing products
 - Docosahexaenoic acid (DHA) and Arachidonic acid (ARA) (GRAS and Novel Food)
 - Emulsifiers
 - Algal oils (*Chlorella sp.*); *Euglena sp.* biomass

Diverse Product Experience (continued)

➤ Proteins

- Milk-derived proteins and fractions
- Enzymes
- Fermentation products
- Bioactive peptides
- *Euglena sp.*
- *Chlorella sp.*

➤ Prebiotics and Probiotics

- Inulin, Oligofructose
- *Bifidobacterium longum* BB536; *Bifidobacterium breve* M-16V; *Bifidobacterium infantis* M-63

➤ Botanicals and Natural Products

- Edible species-derived extracts

➤ Recombinant (Derived) Products

- Flavr-Savr tomato
- Human milk oligosaccharides

Diverse Product Experience (continued)

➤ Antimicrobials

- Bovine milk-derived lactoferrin raw carcass spray
- Lauramide arginine ethyl ester (LAE)
- Global (EU, Latin America, Africa, Canada) food additive petition submissions for 4 antimicrobial products for use in beverages

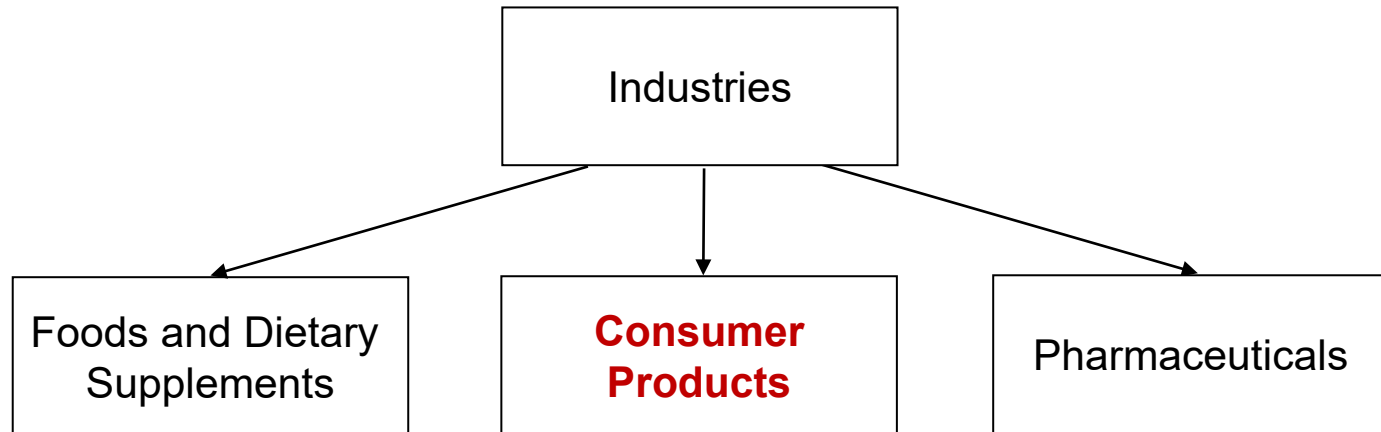
➤ Bacteriophages

- For antimicrobial use in poultry processing

➤ Products for Animal Use

- Companion animal use (joint health)
- Feed use in production animals (enhancing nutritional quality)
- Veterinary medical device
 - Plug for prevention of mastitis in cows

Industry Sectors We Serve



Consumer Products Services

- **Regulatory Review**

- We help helps client assess their product compliance with current and emerging scientific and regulatory guidance (FDA; EPA; Proposition 65; EU, including the 7th amendment to the cosmetic directive)

- **Product Liability Assessment**

- We help develop a Product Stewardship program to insure appropriate guidance for sourcing of ingredients and for manufacturing of the product. We are available to help defend the safety of a product in litigation

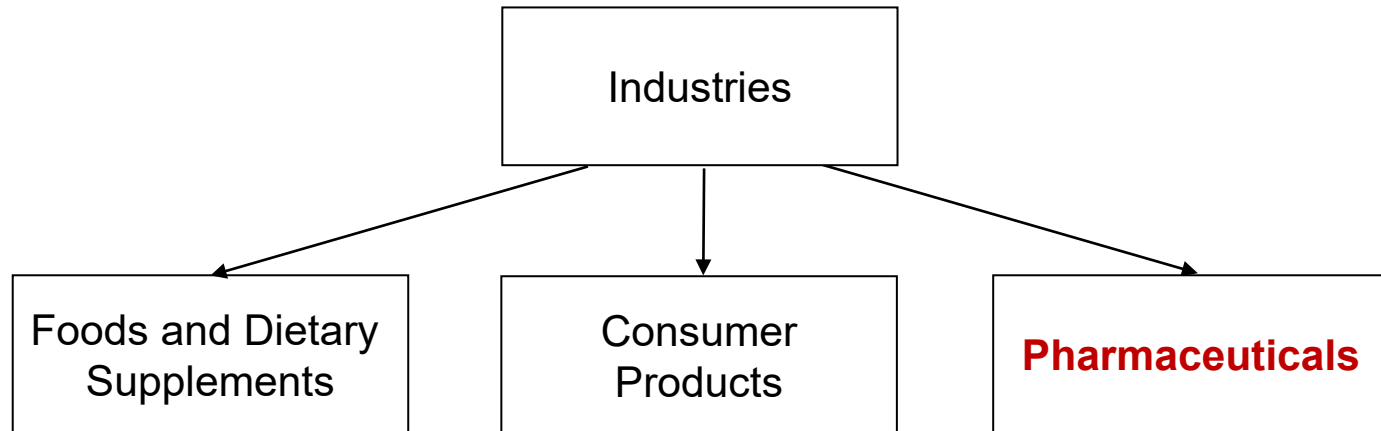
Consumer Products Services (continued)

- **Safety Evaluation**
 - Screening for adverse health effects:
 - Potential health risks related to employee and/or consumer exposure to consumer products are evaluated
 - Safety evaluation:
 - Unresolved issues and uncertainties in the available data are identified, and a recommendation is developed about the safety of the ingredient and the potential risk of the product during various points in its life cycle (use, misuse, disposal/recycling) is determined
 - Analytical, pre-clinical, and clinical study support:
 - Design, placement, and monitoring of studies
 - Results analysis and finalizing study reports

Consumer Products Services (continued)

- **Global Cosmetic Ingredient Services:**
 - Cosmetic health risk, safety and exposure assessments
 - Preparation and assessment of cosmetic ingredient data
 - Safety reports for ingredients including safety testing procedures, study placement and monitoring of necessary safety studies (*in vitro* and *in vivo*)

Industry Sectors We Serve



Pharmaceutical Industry Support

- **Our scientific and regulatory consultants assist clients involved in drug development within the pharmaceutical industry with risk-based strategies**
- **We complete due diligence assessments in the drug development process to identify gaps in scientific and regulatory compliance**
- **Our extensive experience in Regulatory Submissions ensures that filings are submitted with the highest level of detail and quality**

Pharmaceutical Industry Support

- **Study Design and Oversight**
 - Toxicology and Pharmacology
 - Chemistry, Manufacturing and Controls
 - Process Analytical Technologies
 - Clinical Trials (Phase I-IV)
- **Regulatory Filings**
 - Investigational New Drug Application (IND)
 - New Drug Application (NDA) and Abbreviated New Drug Application (ANDA)
 - Combination Products
 - Drug Master Files
- **Compliance Planning and Strategy**
- **Manuscript and Report Writing**
- **Scientific and Regulatory Due Diligence Assessments in support of Merger and Acquisition**

Medical Device Industry Support

- **Regulatory Filings**
 - 510(k)
 - Investigational Device Exemption (IDE)
 - Premarket Approval (PMA)
- **Scientific and regulatory due diligence**
- **Class I, II, and III devices**
- **Substantial equivalence determinations**
- **Material specifications**
- **Standard test methods and guides**
- **Biocompatibility**
- **Risk analysis**
- **FDA CDRH compliance master planning and strategy**
- **Quality review and design review**

Further Information

For more information on our mission, values, quality, consultants, or if you would like a quote, please contact Drs. Kruger or Conze.

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