

# CLIENT NAME

Anytime, Anywhere, USA ♦ (111) 111-1111 ♦ client-name@yahoo.com

## SENIOR SCIENTIST

### Accomplished Instructor | Assay Development

Renowned, experienced Senior Scientist with a history of successful research, extensive list of peer-reviewed journal publications in protein chemistry, structure and function, molecular immune recognition of proteins is eager to be successful and continue contributing with his able expertise and professionalism in Life Sciences Research, Biotechnology or Pharmaceutical industry. Possess extended expertise in chemical synthesis, isolation, purification, molecular and structure-functional characterization of biologically active macromolecules and their synthetic functional domains. Uphold thorough and current knowledge of tissue culture and hybridoma techniques. Attained and maintain expert level knowledge and understanding of assay development on molecular and sub-molecular bases. Experience in customer outreach; acquisition, management and distribution of organic compounds in North America, Europe and Asia.

### NOTABLE ACHIEVEMENTS

- **Extensive Teaching Experience:** Held coveted position as an **instructor** in Department of Biochemistry and Molecular Biology, Baylor College of Medicine in Houston, Texas for six years.
- **Assay Management & Utilization:** Development of synthetic epitope based diagnostic assay to detect botulinum neurotoxins. Stimulation, modulation and epitope-specific suppression of immune responses to protein antigens. Protein chemistry, molecular immunology, toxinology. Medium and high-throughput screening of small molecule drug or drug-like molecules for pharmaceutical industry.
- **Product Development & Marketing & Distribution:** Realized over \$220,000 in revenue by initiating and expansion of nature inspired organic compounds isolated from plants of Eastern European and Central Asian countries. Acquired and entered more than 10,000 new drug-like compounds into the database and organized them together with other products in the company main stock that were sold to other pharmaceutical companies (e.g. Eli Lilly, Du Pont, Astra Zeneca, Bayer, GlaxoSmithKline, Novartis, Sigma-Aldrich, Namiki Shoji and Nacalai Tesque)

### AREAS OF SCIENTIFIC EXPERTISE

Peptide Organic Chemical Synthesis • Protein Structure and Function Correlation • Molecular Immune Recognition of Antigens and Precise Delineation of Antigenic and Innate Functional Regions on Proteins • Tissue Culture and Hybridoma Techniques • Molecular and Sub-Molecular Assay Development and Application • Extended Experience with Animal Models • CDC Select Agent (botulinum neurotoxins A and B) and Human and Animal Biologic Sample Chemical Database Management • Project Conceptualization, Organization and Management • New and Junior Employee Mentoring Skills • Language Proficiency: Russian, Uzbek

### PROFESSIONAL EXPERIENCE

**UNIVERSITY OF TEXAS HEALTH SCIENCE CENTER AT HOUSTON, DEPT. OF NEUROLOGY, Houston, Texas • 2012-2014**

#### Research Associate:

Design, modification, chemical synthesis, biochemical characterization and application of conjugated transport molecules (e.g. highly specific monoclonal antibodies against membrane receptors on nerve cells) for delivery of the series of biologically active "cargo" proteins (e.g. hexosaminidase B, peroxidase C, erythropoietin) to healthy and damaged nerve cells. Study their distribution in organ tissues. Design, chemical synthesis, characterization and application of complex contrast agents containing lanthanide metal ions (oxidation state 3+) and monoclonal antibodies against the nerve cell surface receptors that are for MRI imaging studies.

#### Main Achievements

- Developed optimal synthesis and purification conditions for chemically linked conjugates containing 1:1 molecular ratio of monoclonal antibody and biologically active cargo proteins above with supreme permeability through the biological barriers that larger molecular weight conjugates cannot penetrate
- Chemically synthesized and characterized contrast agents of anti-ganglioside monoclonal antibodies with lanthanide metal ions (e.g. Gd<sup>3+</sup>) and studied their distribution in mice in vivo and ex vivo.

- Co-authored 1 peer-reviewed research article in an international scientific Journal of Neuroimmunology and submitted one research manuscript in co-authorship to Nature Biotechnology. Co-organized and presented a plenary lecture in an International Scientific Conference at California State University Fullerton (California, May 19-23, 2014, <http://nsm.fullerton.edu/usuzcls>)\*

**BAYLOR COLLEGE OF MEDICINE, DEPT. OF BIOCHEMISTRY AND MOLECULAR BIOLOGY, Houston, Texas • 2001-2012**

**Instructor (Faculty Position) (2006-2012):** Complete chemical synthesis of botulinum neurotoxin B (BoNT/B, 1291 amino acids, 150,000 Da) as 92 nineteen residue long overlapping peptides, their purification and characterization. Elucidation of sub-molecular immune recognition regions on BoNT/B molecule recognized by antibodies (B cells) raised in mice, horse and human cervical dystonia patients injected with Myobloc (BoNT/B). Synaptosome-binding and other functional regions on BoNT/B molecule heavy chain. Development of epitope based molecular assay methods.

**Main Achievements**

- Joint patent application as a co-inventor in epitope-specific suppression of immune responses against botulinum neurotoxin A (BoNT/A) (in collaboration with Allergan, Inc.)
- Referee of research proposals at the European Union International Association for the Advancement of Science (INTAS), Brussels, Belgium (1999-2007). Reviewer of research manuscripts for publication at 8 international scientific journals (e.g., The Protein Journal, Immunological Investigations, Preparative Biochemistry and Biotechnology, Immunopharmacology and Immunotoxicology, Vaccine)
- Key involvement in research programs on botulinum neurotoxins A and B enabled the lab to continuously secure funding for the last decade
- Co-authored 17 peer-reviewed research articles in international scientific journals, and participated in 7 International Scientific Conferences\*
- Mentored 7 junior lab employees to proficiency in protein chemistry and molecular immunology

**Research Associate (2001-2006):** Complete chemical synthesis of BoNT/A HN (412 amino acids, ~50,000 Da) and BoNT/A LC (448 amino acids, ~50,000 Da) as 60 nineteen residue long overlapping peptides, purification and structure characterization. Sub-molecular elucidation of immune recognition regions on BoNT/A HN and LC recognized by antibodies (B cells) raised in mice, horses, chickens and human cervical dystonia patients injected with Botox (BoNT/A). Determined the synaptosome-binding regions on BoNT/A molecule heavy chain. Studied 484 cervical dystonia patient antibody samples for the immunological status relative to the treatment with Botox or Myobloc. Development of synthetic epitope based molecular assay methods for BoNT/A.

**Main Achievements**

- The most important outcome of the work has been substantial contribution to Baylor's visibility in a crucial public health problem. In terms of the US national interest the most important contribution has been elucidating the molecular basis for the design of stable synthetic peptide vaccines against the two potential biological weapons (BoNT/A and BoNT/B)
- Co-authored 9 peer-reviewed research articles in international scientific journals, and participated in 5 International Scientific Conferences\*
- Mentored to able expertise 5 lab employees in protein chemistry and molecular immunology

**TIMTEC, LLC, Newark, Delaware • 1999-2001**

**Operations Manager, Research and Development (1999-2001):** Worldwide acquisition, CHED - Chemical Database Management System management and trade of diversity, targeted, template-based or nature inspired drug-like compound libraries for throughput biological screening in pharmaceutical companies of Americas, Western Europe and Asia. Organized trips and attended Scientific Conferences for marketing TimTec products and services and initiated collaborative cooperation with pharmaceutical companies and research centers.

**Achievements**

- Initiated and expanded acquisition of nature inspired organic compounds isolated from plants of Eastern European and Central Asian countries
- Acquired and entered more than 10,000 new drug-like compounds into the database and organized them together with other products in the company main stock that were sold to other pharmaceutical companies (e.g. Eli Lilly, Du Pont, Astra Zeneca, Bayer, GlaxoSmithKline, Novartis, Sigma-Aldrich, Namiki Shoji and Nacalai Tesque)
- Amassed over \$220,000 in revenue

## Client Name, PhD, Page 3

- Organized a number of new collaborative contacts with several research entities in Ukraine, Central Asia and acquired new building blocks and drug-like compounds

### **INSTITUTE OF BIOORGANIC CHEMISTRY, Tashkent, Uzbekistan • 1996-1999**

**Associate Professor (1996-1999):** Development of biochemical and immunological sensor technologies for monitoring of ecological situation in Uzbekistan.

#### **Main Achievements**

- Co-authored 7 peer-reviewed research articles in scientific journals, and participated in 3 International Scientific Conferences\*

### **BAYLOR COLLEGE OF MEDICINE, DEPT. OF BIOCHEMISTRY, Houston, Texas • 1991-1996**

**Postdoctoral Fellow (1991-1996):** Complete chemical synthesis of alfa-bungarotoxin (alfa-BTX, 74 amino acids, 8000 Da) as 11 peptides, purification and structure characterization. Studied antigenic regions on alfa-BTX recognized by antibodies (rabbit, mouse) and T-cells (mice). Molecular basis of synthetic peptide vaccine development. Hybridoma and monoclonal antibody development against alfa-bungarotoxin. Design, synthesis, characterization and specific activity of synthetic peptide enzymes (pepzymes; i.e. lysozyme, RNase, trypsin, chymotrypsin). Chemical synthesis as a team member of BoNT/A HC (442 amino acids, ~50,000 Da) as 31 nineteen residue long overlapping peptides, purification and structure characterization. Described immune recognition regions on BoNT/A HC recognized by antibodies (B cells) raised in mice, horses and human volunteers.

#### **Main Achievements**

- Co-authored 4 peer-reviewed research articles in international scientific journals and a book chapter and participated in 1 International Scientific Conference\*

### **INSTITUTE OF BIOORGANIC CHEMISTRY, Tashkent, USSR • 1980-1991**

**Graduate Student, Research Associate, Visiting Research Associate (1980-1991):** Synthesis of affinity adsorbents with chemically coupled proteins or antibodies. Isolation, characterization and immunochemical properties of protein neurotoxins of poisonous animals of Central Asia (i.e. black widow spider, scorpion and cobra). Synthesis, characterization and properties of immune modulators and stimulators against toxin poisoning.

#### **Achievements**

- Completed the doctorate work, compiled and publicly defended a dissertation for the scientific degree of Candidate of Sciences (PhD) in Chemistry
- Co-authored 8 peer-reviewed research journals articles and participated in 12 International Scientific Conferences\*
- Established and conducted collaborative research with 3 academic research centers in Russia
- Co-inventor of 4 USSR patents in developing highly specific immune sera against neurotoxin poisoning (in collaboration with Russian Institute of Epidemiology and Microbiology; Russian Institute of Immunology)

## **EDUCATION & SCIENTIFIC DEGREES**

### **PhD, Bioorganic Chemistry and Chemistry of Natural and Physiologically Active Compounds, 1990**

Institute of Bioorganic Chemistry, Tashkent, USSR

### **Bachelor of English, 1984**

University of Foreign Languages, Tashkent, USSR

### **Master of Bioorganic Chemistry and Chemistry of Natural and Physiologically Active Compounds, 1980**

Institute of Bioorganic Chemistry, Tashkent, USSR

### **Bachelor of Chemistry (major) and Pedagogy (minor), 1978**

National University of Uzbekistan, Tashkent, USSR

## **TECHNICAL PROFICIENCY**

**Microsoft Word, Excel, PowerPoint, Chemical and Scientific Databases, IBM Notes, SAP**

\*List of over 50 publications and references will be provided upon request