**Information Document\***
**NCSC Scientific Officer (Medical)**
Agriculture, Fisheries and Conservation Department (AFCD),
Hong Kong Special Administrative Region (HKSAR) Government

- ✓ Are you looking to take your career to the next level?
- ✓ Are you seeking a new direction and role in driving improvements to public and animal health?
- ✓ Are you ready to join and work hand in hand with dedicated professional and technical staff to provide high quality veterinary laboratory diagnostic service to safeguard public and animal health in Hong Kong?
- ✓ Do you have the passion for developing new tests, conducting research and expanding laboratory capacity in the only governmental veterinary laboratory in HKSAR?
- ✓ Are you interested in taking collaborative actions in HKSAR to combat global antimicrobial resistance (AMR) problem?

If the above sounds like you then read on.

- **Who we are**
  - AFCD's mission is to serve the community by providing services to secure orderly and efficient production and marketing of agricultural and fishery produce, enforce regulations on plants, pesticides and animal controls, and conserve our natural environment and safeguard the ecological integrity.
  - The officers we are looking for will work in relation to animal health, veterinary public health and food safety in Hong Kong's official veterinary diagnostic laboratory or will be involved in establishment and implementation of the long term antimicrobial use (AMU) and AMR surveillance programme in both farm animal and companion animal sectors.
  - The scope of testing of the veterinary diagnostic laboratory includes anatomical pathology, immunology, molecular diagnostics, microbiology and chemical residues testing. A range of animal diagnostic and surveillance tests with an infectious disease focus are provided.
  - Our scope of work on AMR also includes performing numerical and statistical analysis on data collected from the surveillance programme, compiling timely reports, conducting literature review and information search and disseminating updated information on local and global situation of AMR and/or AMU and providing technical support to the design of

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guidelines, surveys and relevant research studies.

- **Why work for us**
  - You will be supporting important government initiatives and decisions as it relates to animal disease diagnostics and animal welfare, engage in surveillance of diseases, antimicrobial resistance patterns with animal health, public health concerns and help safeguard food safety. Examples of emerging diseases affecting HKSAR and/or global countries and relevant to our work include avian influenza (AI), African Swine fever (ASF), and Lumpy Skin Disease (LSD). Notably, AFCD's vet lab identified along with collaborators the world's first detection of a dog infected with SARS-CoV-2 in 2020 and in early 2022 the first evidence of pet hamster to human transmission of SARS-CoV-2.
  - You will have a valuable opportunity to build up experiences of animal diseases, animal/zoonotic pathogens, tackle the global AMR problem, promote your leadership and research skills, and build networks with other local and regional academics and scientists.
  - You will work in a supportive people orientated growth focused culture. AFCD's veterinary laboratory received the Testing and Certification Manpower Corporate Development Award issued by the Hong Kong Council for Testing and Certification (HKCTC) for 2021-22.

- **What you will do**
  You will be joining a team of enthusiastic and supportive veterinary officers, scientific officers or laboratory technologists and other support staff to work in one or more of the following areas/roles:

  **Advanced Molecular Testing**
  - Next- generation/ third generation sequencing
  - Develop, optimize and validate diagnostic test methods
  - Research and development project management
  - Phylogenetic analysis of emerging animal diseases circulating in HK
  - Literature review on emerging animal/ zoonotic diseases
  - Review existing test methods based on current international standards
  - Collaborate with Veterinary Officers on diagnostic method development

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**Bioinformatics Analysis**
- Curate and maintain commonly use bioinformatics tools in Linux OS
- Lead and design bioinformatics projects/ studies
- Pipeline development for data analysis
- Database development and maintenance for animal diseases
- Phylogenetic and coalescent analysis of emerging animal diseases circulating in HK
- Provide bioinformatics training to other officers
- Provide support to other projects involving data analysis


**Cross-Discipline Scientist**
- Animal disease diagnostic panel establishment
- Development of a digital pathology analytics platform
- Develop, optimize, and validate diagnostic test methods
- Participate in ISO17025 accreditation activities
- Laboratory management and staff training
- Literature review on emerging animal/ zoonotic diseases
- Cross-disciplinary liaison with experts and other governmental departments
- Provide administrative support as needed


AMR scientist
- Devise and maintain surveillance programme on AMR and AMU in local farm animal and companion animal sectors
- Collate and maintain data and analyze the surveillance results
- Research and provide advice on the latest international developments and standards in relation to containing AMR
- Devise guidelines on prudent and responsible antimicrobial use
- Develop epidemiologically sound survey approach for understanding knowledge, attitude and perception survey on AMR matter
- Liaise with government departments and other institutions in research studies and analysis relating to AMR and AMU
- Provide administrative support as needed


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- **What we are looking for**

**Qualifications**
Please refer to the official advertisement.

**Job experience**
Please refer to the official advertisement for minimum requirements.
Experience listed below would be beneficial for each of the roles:

**Advanced Molecular Testing**
- Next-generation/ third generation library preparation and sequencing
- Sequencing data analysis (including Sanger and next-generation sequencing (NGS))
- Biostatistics
- Quantitative real-time polymerase chain reaction (PCR) and digital PCR test development and optimization
- Research and development project management
- Phylogenetic studies

**Bioinformatics Analysis**
- Curate and maintain commonly use bioinformatics tools in Linux OS
- Lead and design bioinformatics projects/ studies
- Next-generation/ third generation data analysis
- Pipeline development for genomic data analysis
- Phylogenetic and coalescent analysis
- Database development and maintenance
- Biostatistics

**Cross-Discipline Laboratory Scientist**
- Develop Multiplex panel using Luminex technology
- Diagnostic test development and validation
- Application of computer-aided diagnosis (CADx)
- Medical image database construction
- Application of parallel computing
- Working in Biosafety Level-3 laboratory
- ISO17025/15189 accredited laboratory experience
- Laboratory management and staff training

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## Scientist (AMR)

- Epidemiological methods/ Studies of antimicrobial resistance
- Biostatistical analysis
- Microbial culture and sensitivity testing
- Phenotypic antimicrobial resistance data analysis
- Genotypic antimicrobial resistance data analysis (NGS data and Sanger sequencing data)

**Personal characteristics**

We are looking for talented individuals who can work independently but with a strong sense of team work. Someone who is committed to the team's goals and mission, eager to help and learn along the way, an optimistic individual with great interpersonal and communication skills.

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