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## 董事長的話



「不積跬步無以致千里，不積小流無以成江海。」醫療財團法人病理發展基金會至今已屆滿三十個年頭，經過一點一滴的累積，一步一腳印的踏實耕耘，期間承蒙各界的愛護指導和所有同仁的努力不懈，使得我們在病理檢驗方面的貢獻，獲得臨床醫院以及社會大眾一致的信任和肯定，使得本中心得以繼續在穩定中求發展。

回顧過往，本中心的成立是源自於民國 69 年，參加國建會之學者專家鑑於國內醫界偏重臨床醫療，而建議應設立病理中心，以確保醫療的品質。經多方努力籌備，於 71 年 12 月底由臺北市政府與台北市瑤公農田水利會共同捐助成立「財團法人台北病理中心」。其後，本中心配合行政院衛生署的規定，於 97 年更名為「醫療財團法人病理發展基金會」，並設立「醫療財團法人病理發展基金會——台北病理中心」。

本中心除了提供「解剖病理」、「臨床病理」以及「新生兒篩檢」的檢驗服務外，隨著醫學及生物科技的日新月異，本中心更跨足分子醫學領域，積極地從事 B、C 型肝炎檢驗、胃幽門螺旋桿菌檢測、藥物基因學相關檢測和癌症標靶藥物相關基因檢測研究工作，採用精密的儀器設備和先進的技術，以病人的需求為第一考量，將最新的醫學科學研究應用於臨床診斷的服務。

為了持續提供穩定而高品質的檢驗服務，在江前執行長的帶領及所有同仁兢兢業業的努力之下，本中心於民國 93 年通過 TAF「全國認證基金會」的醫學實驗室認證並獲頒「中華民國實驗室認證證書」，更於民國 99 年獲得「標準實驗室」的殊榮。期許本中心所有工作同仁今後仍將百尺竿頭，堅持「檢驗精確、服務熱誠、效率卓越、專業團隊」的核心價值，為國內醫療的病理服務及研究教學貢獻心力。

本中心成立迄今，一向秉持尊重生命、視病猶親的情懷，善盡應有的社會責任，故除了不斷追求病理檢驗技術的精進，為維護國人的健康而努力不懈外，本中心亦持續關懷慈善團體，於必要時給予適時的協助，使能繼續照顧需要幫助的民眾。

本中心期許在現有的基礎上，立足台灣，放眼世界，期盼全體同仁還要再接再厲，持續提升醫療專業及品質，發展醫學研究和國際接軌，繼續為提供最優質的病理醫療服務全力以赴。

陳炯松

## A Message from our President, Mr. Chen Chung-Sung

There is a Chinese proverb that says "Great distances are not reached by big leaps, but small cumulative steps; Rivers are not formed overnight, but created from trickling streams over time." These are the words that paved the way for the Taipei Institute of Pathology's (TIP) continuous march towards outstanding achievements and excellence in professional pathology services for over 30 years, thereby enabling it to gain the trust and recognition of several medical institutions nationwide. We express our appreciation for the dedication and relentless efforts of our professional team as we continue to steadily develop into Taiwan's premier pathology service provider.

The Taipei Institute of Pathology was established in 1980, following a meeting of renowned experts attending the National Development Council. These attendees realized that the medical community overly relies on clinical practice in order to ensure the quality of medical care. Their recommendation led to the establishment of the Institute of Pathology. With much effort and preparation, the Taipei Institute of Pathology was finally established in December, 1982 with funds donated by the Taipei City Government and the Taipei Liugong Irrigation Association. In order to be consistent with the provisions set by the Department of Health, (now the Ministry of Health and Welfare) the institute was renamed "Pathology Development Medical Foundation," with the Taipei Institute of Pathology established under it in 2008.

Aside from providing services for anatomical and clinical pathology as well as newborn screening, a Molecular Medicine Lab was also established in order to cope with the rapid changes and advances in the world of medical biotechnology. Hepatitis B & C viral load and Helicobacter pylori testing were added to our present line of numerous tests. Pharmacogenetics, cancer target therapy related tests and research studies are some of the new platforms that were set up. This new addition to our institution allows us to actively engage in education and research using precision equipment and advanced technology to offer the newest and most innovative medical research applications for improved clinical diagnostic services, putting the need for patient care as our first priority.

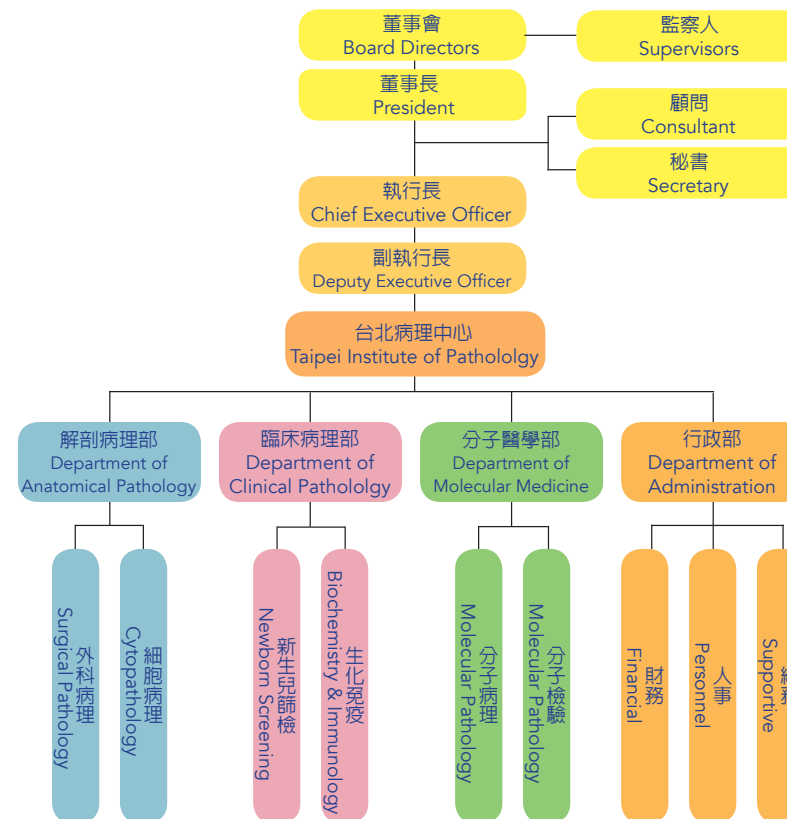
Our center continues to deliver consistent and high quality diagnostic services, thanks to the leadership of our previous CEO, Dr. Chiang and the conscientious efforts of all our colleagues. In 2004 we completed the Medical Laboratory Accreditation process held by the Taiwan Accreditation Foundation (TAF) and was awarded the Certificate of Laboratory Accreditation. Moreover we also had the great honor of being granted the award of "Benchmark Laboratory" from TAF in 2010. We expect continued success from all our colleagues by insisting on these core values: Accurate Diagnosis, Dedicated Services, Excellence in Efficiency and Professionalism in Teamwork. They all contribute to our nation's medical pathology services, research and education.

Since its establishment, TIP has upheld the belief in the respect for life, considering patients as members of our own family and dedicating its efforts towards social responsibility. We not only continue to seek progress in advancing pathology techniques to ensure good public health, but we also contribute to the many charities and in-time support for taking care of disadvantaged minorities.

Standing on a strong foundation to explore the world, we hope that all of our colleagues persist in their efforts to continuously upgrade the medical profession, develop medical research to meet international standards and continue to wholeheartedly provide excellent medical pathology services.

## 組織系統表 Organization Chart

### 醫療財團法人病理發展基金會 Pathology Development Medical Foundation





## 第九屆董事會

依照本法人捐助章程第六條規定，本法人董事會置董事十五人；第七條規定董事長由當屆董事互選之；第八條規定，本法人置監察人三至五人。另依醫療法第四十三條規定，醫療財團法人之董事，以九人至十五人為限；具醫事人員資格者，不得低於三分之一，並有醫師至少一人。本法人第九屆董事在十五位董事中，有九位具醫師及其他醫事人員資格。

## The 9th Board of Directors

According to Article No. 6 of the TIP constitution, the board of directors is to be composed of 15 members. Article No. 7 states that the president is to be elected by the members of the current board of directors and Article No. 8 maintains that there should be 3 to 5 supervisors. A provision in Article No. 43 of the Medical Care Law specifies that the board of directors of the foundation can be composed of from 9 to 15 members, of which at least one third of the directors should be medical experts and at least 1 should be a doctor. Among the 15 members in the ninth session of the board of trustees, 9 of them are either doctors or medical experts.



職稱：董事長  
姓名：陳炯松  
總統府資政 / 財團法人台北市私立愛愛院董事長  
  
Title: President  
Name: Chen, Chiung-Sung  
Presidential Advisor / President of Taipei Private Ai-ai Nursing Home



職稱：董事  
姓名：吳碧珠  
台北市議會議長  
  
Title: Director  
Name: Wu, Bi-Zhu  
Speaker, Taipei City Council



職稱：董事  
姓名：郁慕明  
國際脈絡股份有限公司董事長  
  
Title: Director  
Name: Yu, Mu-Ming  
President, International iCare Asia Co., Ltd.



職稱：董事  
姓名：藍忠孚  
陽明大學醫學院教授 / 慈濟大學前校長  
  
Title: Director  
Name: Lan, Jong-Fu  
Former President of Tzu Chi University, Professor of Yang Ming University



職稱：董事  
姓名：廖運範  
中央研究院院士  
  
Title: Director  
Name: Liaw, Yun-Fan  
Academician of Academia Sinica



職稱：監察人  
姓名：林錦松  
台北市錫瑤環境綠化基金會董事長  
  
Title: Supervisor  
Name: Lin, Jin-Song  
President of His Liu Environmental Greening Foundation



職稱：董事  
姓名：林澤安  
西園醫院院長 / 永越健康管理中心負責人  
  
Title: Director  
Name: Lin, Zhe-An  
Director, West Garden Hospital  
Superintendent of Enoway Health Maintenance Center



職稱：董事  
姓名：洪文棟  
新勝股份有限公司董事長  
  
Title: Director  
Name: Hon, Wen-Dong  
President, Xin Sheng Co., Ltd.



職稱：董事  
姓名：江宏  
醫療財團法人病理發展基金會台北病理中心專任顧問  
  
Title: Director  
Name: Chiang, Hung  
Consultant, Taipei Institute of Pathology



職稱：董事  
姓名：陳定信  
中央研究院院士  
  
Title: Director  
Name: Chen, Ding-Shinn  
Academician of Academia Sinica



職稱：監察人  
姓名：周清標  
台北市瑤公農業產銷基金會常務董事  
  
Title: Supervisor  
Name: Chou, Ching Biao  
Executive Director, Taipei Liu-Kung Agriculture Foundation



職稱：董事  
姓名：林濟民  
台北市瑤公農田水利會會長  
  
Title: Director  
Name: Lin, Ji-Min  
President of Taipei Liugong Irrigation Association



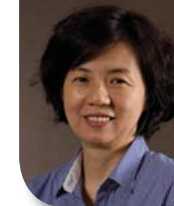
職稱：董事  
姓名：李學仁  
台北市瑤公農田水利會財務組長  
  
Title: Director  
Name: Li, Shiue-Ren  
Director of Financial Division, Taipei Liugong Irrigation Association



職稱：董事  
姓名：吳仲榮  
台北市瑤公農田水利會總務組長  
  
Title: Director  
Name: Wu, Jung-Rung  
Director of General Affairs Division, Taipei Liugong Irrigation Association



職稱：董事  
姓名：江福田  
台大醫院心血管中心主任  
  
Title: Director  
Name: Chiang, Fu-Tien  
Director of Cardiovascular Center of NTUH



職稱：監察人  
姓名：常瑞倩  
前台北病理中心副執行長  
  
Title: Supervisor  
Name: Chang, Jui-Chien  
Former Deputy CEO of TIP

## 我們的宗旨

本中心成立的主要目的以熱忱負責與高效率的工作態度，配合臨床需求，提供能與國際接軌的病理檢驗技術，協助提昇國內整體的醫療品質。

為達成我們的品質政策，訂定了以下品質目標：

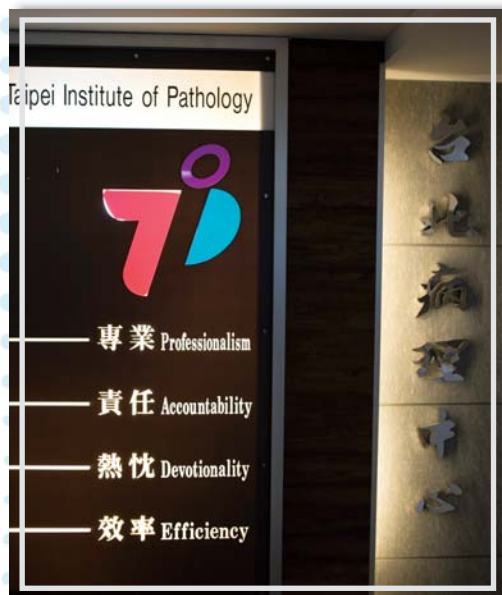
- (一) 開發新的檢驗方法與項目
- (二) 更新改良檢驗儀器
- (三) 改善實驗室工作環境
- (四) 學習專業新知
- (五) 參與國際性的學術交流
- (六) 提昇顧客滿意度

## Our Objectives

The objective of our institute is to encourage an enthusiastic, responsible and highly efficient work attitude for: supporting clinical needs; providing pathology testing techniques that meet international standards; and working hand-in-hand with other medical institutions to continually upgrade the medical services as a whole in Taiwan.

The following goals have been set up to achieve a high standard of quality.

1. Develop new testing methods and items for better services.
2. Improve and renew testing equipment.
3. Improve the laboratory environment.
4. Learn and introduce new technical knowledge.
5. Participate in international academic affairs.
6. Meet customer needs and improve customer satisfaction.



## 未來展望

我們目前主要的業務如下：

- (一) 接受委託辦理病理檢驗業務
- (二) 從事病理技術之研究及成果之推廣事項
- (三) 從事公共衛生及預防醫學之研究事項
- (四) 辦理疾病預防、新生兒篩檢、健康檢查等保健服務事項
- (五) 辦理人體中環境危害物質之檢測
- (六) 協助公私立醫療院所從事病理相關及醫事技術人員之訓練及交流
- (七) 辦理其他有關病理學術技術研究發展事項

未來我們將繼續以兢兢業業的精神，承接醫療院所委託之病理檢驗，提供高品質的病理結果報告；開發新的罕見遺傳疾病之篩檢方法與應用，嘉惠更多的新生兒；配合醫學的最新發展，開發新的腫瘤基因檢測項目，提供臨床癌症標靶治療所需的資訊；建立能與國際接軌之平台，成為臨床試驗重要的病理中心實驗室；並持續擴大辦理與病理檢驗有關之社會服務，本著「取諸社會，用諸社會」之精神，為守護國人的健康而努力。

## Future Prospect

Our current major tasks are as follows:

1. To conduct referral pathology testing services
2. To promote new research in pathology technology and promote its outcome
3. To conduct research in public health and preventative medicine
4. To promote disease prevention, newborn screening, health checks, and other health services
5. To conduct testing for environmental hazardous substances in the human body
6. To assist in training and exchanges of pathology related medical updates among technicians in public and private hospitals
7. To organize pathology related academic research and work development

In the future, we will continue to work with the spirit of responsibility and conscientiousness to: provide high quality pathology reports; develop new testing and applications for screening rare genetic diseases, thus providing more benefits to newborns; utilize the latest medical techniques in developing new tumor gene detection tests, thereby providing the needed information for clinical cancer target therapy; and to establish a platform that meets international standards. The words "From the society, to the society" or giving back to the community, by thriving for and guarding the health of our fellow countrymen, has become our ultimate goal. It is the hope of TIP to continuously expand pathology services to the society.





## 工作團隊



執行長：洪伯偉

CEO  
Hung, Hsu-Wei



Deputy CEO  
Ho, Hui-Chen



Director of Laboratory  
Chiang, Hung

實驗室主管：江宏

# Our Team



解剖病理部主任：吳孝平

Chief, Dept. of  
Anatomical Pathology  
Wu, Hsiao-Ping



醫師：吳孟珍

Pathologist  
Wu, Meng-Chen



醫師：謝怡悅

Pathologist  
Hsieh, Yi-Yueh



醫師：龔士雅

Pathologist  
Kung, Shih-Ya



醫師：吳君潔

Pathologist  
Wu, Chun-Chieh



代技術組長：陳淑娟

Supervisor of  
Technical  
Chen, Shu-Chuan



代技術副組長：張艾琳

Deputy Supervisor  
of Technical  
Chang, Ai-Lin



臨床病理與分子醫學部主任：顧文輝

Chief, Dept. of Clinical  
Pathology & Dept. of  
Molecular Medicine  
Ku, Wen-Hui



技術組長：陳玉華

Supervisor of  
Technical  
Chen, Yu-Hua



技術副組長：楊長潔

Deputy Supervisor of  
Technical  
Yang, Chang-Jie



技術副組長：王麗勻

Deputy Supervisor of  
Technical  
Wang, Li-Yu



行政部主任：呂正期

Chief, Dept. of  
Administration  
Lu, Cheng-Chi



財務組長：沈佳蓉

Supervisor of  
Financial Section  
Shen, Chia-Jung



人事副組長：邱漢軒

Deputy Supervisor of  
Personnel  
Chiu, Han-Hsuan

## 行政部門

行政部係配合業務單位之需求提供相關服務，現有主任一人、組長一人、副組長一人及其他同事四人，其主要業務如下：

- 一、總務組
  - 辦公用品之採購管理
  - 文書收發檔案之管理
  - 辦公場所之安全維護
  - 污染物及廢棄物之處理
  - 財產設備之管理維修及其他總務事宜

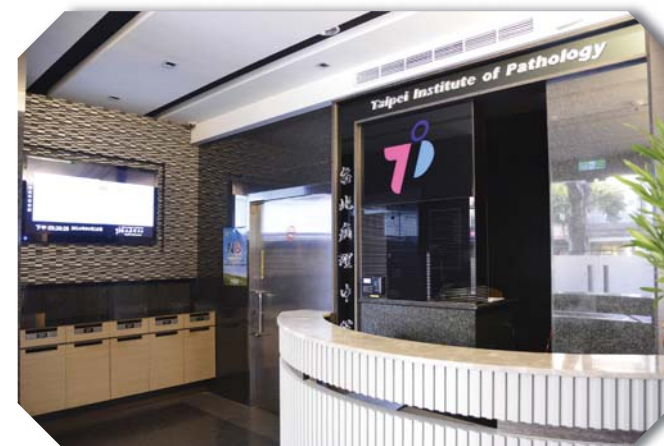
- 二、人事組
  - 員工勤惰之管理
  - 員工聘用之管理
  - 員工考核及獎懲
  - 員工自強活動
  - 員工福利事項及其他人事事宜

- 三、財務組
  - 財務收支及出納管理
  - 會計事務處理
  - 資金調度
  - 年度預算決算之編製
  - 應收帳款及其他財務事宜

## Department of Administration

Provide services to meet the needs of business units. There are 1 Chief director, 1 section Supervisors, 1 Deputy Supervisor, and 4 staffs. Main activities are as follows:

1. General Affairs Section
  - Procurement and Management of office supplies
  - Management of sending and receiving documents files
  - Maintenance of office safety
  - Treatment of pollutants and waste
  - Facilities management and maintenance, and other general matters
2. Personnel Section
  - Attendance management
  - Employment management
  - Evaluation, rewards and punishments
  - Entertainment activities
  - Welfare and other relevant matters
3. Financial Section
  - Financial revenues and expenditures and cashier management
  - Accounting information management
  - Fund application
  - Controlling and auditing annual expenditures
  - Accounts receivable and other financial matters



## 解剖病理部

解剖病理部早年成立的宗旨，乃是為台北市立醫院培訓病理醫師。自成立以來，共有八位病理醫師經由本部門訓練且取得病理專科醫師執照，現任職於各大醫院，本部門已完成草創時期的目標。目前以提供各中小型醫院與診所優良的病理檢驗服務為主，近年來又研發分子病理診斷，期以更先進的診斷方式，配合提供進步的臨床醫療需要，成為臺灣地區的標竿實驗室。解剖病理部目前為臺灣地區最大的婦女子宮頸抹片篩檢中心之一，工作人員陣容堅強，共有病理醫師 5 人，細胞醫檢師 14 人，醫檢師 4 人，技術員 3 人，文書人員 5 人，檢體收件員 1 人。

主要業務可分為以下各項：

### (一) 外科病理

1. 病理切片檢驗
2. 冰凍切片檢驗
3. 特別染色
4. 免疫組織化學染色
5. 組織蠟塊及石蠟切片製作



## Department of Anatomical Pathology

The primary aim for the establishment of the Department of Anatomical Pathology was to train pathologists in the Taipei City government hospitals. Since that time, 8 pathologists have been trained and licensed and are currently working in various well-known hospitals, thus fulfilling our initial objective. Our current focus is on providing quality diagnostic services for small-to-medium sized hospitals and clinics. In recent years, the institute has also set up and developed the Molecular Pathology Diagnosis Lab, earning it a national recognition as a "Benchmark Laboratory," for its advanced diagnostic methods and comprehensive clinical services. The Department of Anatomical Pathology is currently one of Taiwan's biggest Pap smear screening centers. The members of this strong work force currently include 5 pathologists, 14 cytotechnologists, 4 medical technologists, 3 laboratory technicians, 5 clerical staff, and 1 specimen collection staff members.

The main functions are as follows:

### (1) Surgical pathology

1. Pathology biopsy diagnosis
2. Frozen biopsy diagnosis
3. Special staining
4. Immunohistochemistry staining
5. Paraffin tissue block and paraffin section production

### (二) 細胞抹片：

#### 1. 傳統子宮頸抹片：

婦女子宮頸抹片篩檢，是早期發現子宮頸癌最簡便最有效的方法，全民健康保險於民國 84 年開始，提供 30 歲以上婦女每年一次子宮頸抹片檢查。本中心為行政院衛生署國民健康局所認可之病理醫療機構，所檢驗之結果皆可經由線上直接申報師檢個案資料。

#### 2. 液態薄層抹片：

有別於直接塗抹在玻片上的傳統抹片，將採樣後的細胞體體，裝進一個盛有特殊保存液的瓶子內，而不是塗在玻片上，經微電腦抹片製作儀，將檢體製作為薄層抹片。

#### 3. 非婦科抹片：

除了子宮頸抹片以外之剝落細胞學檢查均屬之，包含兩大類，第一大類體液細胞檢查，含痰、尿、腹水、腦脊液、胸水、心包膜積水、氣管刷取及氣管沖洗液等。第二大類穿刺細胞檢查，含甲狀腺、淋巴腺、乳房、肺臟、肝臟、胰臟、腫瘤等穿刺細胞檢查。

#### 4. 人類乳突病毒篩檢：

經過醫界半世紀的努力，子宮頸癌的致病原因，已經確認和人類乳突病毒有高度的相關性，人類乳突病毒是雙股 DNA 病毒，有超過 100 種型別，其中 30-40 型別透過性行為傳染，其中和引發癌症相關的型別稱為「高危險型」約 13 種，分別為 16、18、31、33、35、39、45、51、52、56、58、59、68。經由人類乳突病毒檢驗篩檢，更早檢查身體遭病毒感染的警訊，幫助女性早期發現，早期治療。



液態薄層抹片製片機  
ThinPrep2000

### (2) Cytological pathology:

#### 1. Traditional Pap smear:

The Pap smear examination is the simplest and most effective way for early stage detection of cervical cancer. Since the establishment of the National Health Insurance Program in 1995, females aged 30 and above have been entitled to free annual Pap smear examinations. Our institute is recognized by the Department of Health (now Ministry of Health and Welfare) as a certified pathology medical institution, that registers reports directly with the government's screening statistics program.

#### 2. Liquid Thin Prep Cytology:

This procedure is different from the traditional Pap smear in which the collected cervical brushings specimen is placed into a vial containing a special preservative, instead of being directly smeared on top of a slide. The sample is then made into a thin smear by an automated smear-making instrument.

#### 3. Non-gynecological Cancer Screening:

An Exfoliative Cytology examination includes 2 other categories apart from the Pap smear. The first is the body fluid cytology exam, which includes testing of sputum, urine, ascitic fluid, cerebrospinal fluid, pleural effusion, pericardial fluid, bronchial brushing, and bronchial washing. The second is the aspiration cytology examination, which includes the thyroid, lymph node, breast, lung, liver, pancreas, and tumor aspirations.

#### 4. Human Papilloma virus Screening:

After 50 years of relentless research, it has been confirmed that cervical cancer is definitely linked to the Human Papilloma virus (HPV) infection. The HPV genome is a double-stranded DNA with more than 100 genotypes of which 30-40 are sexually transmitted. Thirteen of them, namely Types 16, 18, 31, 33, 35, 39, 45, 51, 52, 56, 58, 59, and 68 are considered "high risk" types related to cancer. HPV screening allows early detection and early treatment if necessary.



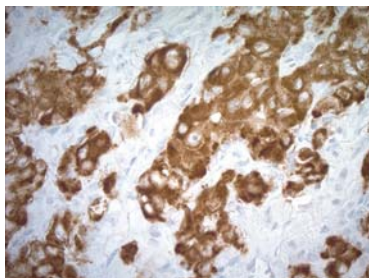
免疫染色機  
VENTANA BenchMark XT



### (三) 分子病理：

#### 1. 肺癌間變性淋巴瘤激酶 (ALK) 蛋白的檢測：

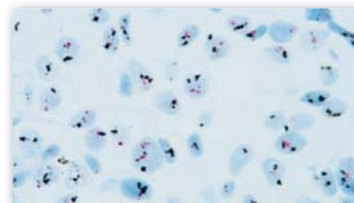
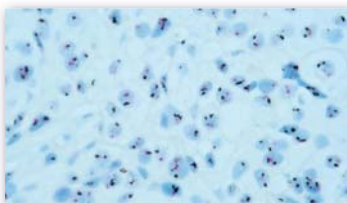
使用 OptiView DAB IHC 檢測套組檢測，並搭配自動免疫組織化學染色機系統，主要針對經過福馬林固定與石蠟包埋之非小細胞肺癌組織檢體，抗-ALK (D5F3) 兔單株抗體是一個一級單株抗體，它和檢體中 ALK 結合，並藉由使用 OptiView DAB IHC 檢測組及 OptiView 放大套組，此特異性抗體便可以在光學顯微鏡下肉眼觀察。此檢測可輔助篩選適合 XALKORI (crizotinib) 治療的患者。



ALK

#### 2. 乳癌 HER-2/neu 的基因擴增檢測：

使用 HER2 Dual ISH DNA Probe Cocktail 檢測。針對經過福馬林固定與石蠟包埋之人類乳癌和胃癌組織檢體，搭配全自動多功能組織病理染色系統，利用雙色原位雜交染色技術，可直接在光學顯微鏡下量化 HER2 基因擴增的現象。此檢查主要為評估病患是否適合接受 Herceptin (trastuzumab) 治療。



DISH

### (3) Molecular Pathology:

#### 1. Anaplastic lymphoma kinase (ALK) Protein for lung cancer detection:

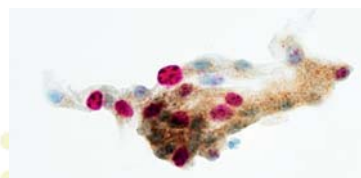
The OptiView DAB IHC Detection Kit and automated immunohistochemical staining with automatic systems, primarily uses formalin-fixed and paraffin-embedded non-small cell lung cancer tissue specimens. The anti-ALK (D5F3) rabbit monoclonal antibody is the primary monoclonal antibody that combines ALK and specimens. By using the OptiView DAB IHC detection Unit and OptiView amplification kit, this specific antibody can be visually observed under an optical microscope. This test assists in screening suitable candidates for XALKORI (crizotinib) treatment.

#### 2. HER2/neu gene amplification for breast cancer detection:

The HER2 Dual ISH DNA Probe Cocktail was designed to quantitatively detect amplification by microscopy; the HER2 gene, via two colour chromogenic in situ hybridization (ISH) in formalin-fixed, paraffin-embedded human breasts; and gastric cancer, including the gastroesophageal junction. Following staining on automated slide strainers, the result can be used as an aid in the assessment of patients for whom Herceptin (trastuzumab) treatment is being considered.

### 3. CINtec PLUS 細胞學檢測

CINtec PLUS 細胞學檢測試劑組合，是運用免疫染色的方法將 P16INK4a 和 Ki67 這 2 種蛋白質應用在子宮頸抹片中，來檢測子宮頸抹片中的細胞生長週期是否出現異常。此項檢測主要可加強在當子宮頸抹片報告結果是非典型鱗狀上皮異常，低度鱗狀上皮病變，又或者是 HPV 高危險群檢測陽性的個案，依據此生物標記的檢測方法去確認抹片裡有沒有高度異生或癌細胞的存在。



CINtec PLUS 40X

本部門亦提供各大學及研究單位之蠟塊代製業務，不做診斷之判讀，讓學術單位之切片品質提升，以期有更好的研究結果發表，以符合本中心之服務宗旨。服務項目包含人類或動物的組織切片代製、HE 染色、免疫組織化學染色、冰凍切片及各類特殊染色如 Masson-trichrome、Alcian blue PH2.5、PAS 等染色。

3. The CINtec® PLUS Cytology Kit is an immunocytochemistry assay for the simultaneous qualitative detection of the p16INK4a and Ki-67 proteins in cervical cytology preparations. It is indicated to be used as an aid in the identification of women with high-grade cervical intraepithelial lesions in a screening population, and in the sub-groups of patients with a Pap cytology result of ASC-US (atypical squamous cells of undetermined significance) or LSIL (low-grade squamous intraepithelial lesion), or in patients with positive high-risk HPV test results.

Our Department also provides paraffin making and embedding tissue services to various universities and research labs, not only for diagnostic purposes, but also with the goal of supporting the mission to help these institutions improve the quality of their biopsy interpretation skills. Our services includes generating human and animal tissue biopsies, hematoxylin-eosin (HE) staining, immunohistochemical staining, frozen tissue biopsies, and various special stains such as Masson-trichrome, Alcian blue pH2.5, PAS, etc0.



## 臨床病理部

本部門有 3 位臨床病理醫師，17 位經驗豐富的資深醫檢師，1 位技術員與 4 位文書人員。

本部門遵循 TAF ISO 15189 認證的規範執行各項檢驗前、中、後的流程，所有檢驗項目均定期參加國內外之各項能力測試與實驗室間比對，歷年來成績優異，同時進行持續改善計畫，以確保檢驗結果之正確性。

臨床病理部的業務範圍主要是特殊及高科技檢驗項目，與各大醫院、診所合作，集中檢驗以避免醫療資源的浪費。服務內容主要為重金屬檢測、新生兒篩檢與分子醫學檢驗等，檢驗報告準確迅速，專業且服務熱誠。為了良好的收檢服務，在台北市與新北市建立收檢服務網，並提供預防保健與相關檢驗諮詢之服務。

檢驗業務分為二大項目：

### (一)、生化免疫：

1. 重金屬檢測：提供之服務包括鉛、鋁、鎘、汞、銅、鋅、鎳等項目，除了是行政院勞委會指定的血鉛測定實驗室外，並於 102 年 10 月通過勞委會委託 TAF 進行之“勞工體格及健康檢查指定醫療機構實驗室查核”，內容為血中鎘；尿中鎘；尿中鎳；尿中汞；血中汞及血中鉛檢測能力與品質查核。重金屬定量分析是本中心的發展重點。
2. 肝炎檢測
3. 質爾蒙檢測
4. 癌症標幟檢測
5. 藥物濃度監控
6. 自體免疫抗體檢測
7. 過敏原分析檢測
8. 放射免疫分析
9. 一般生化、血液檢測
10. 協助學術研究體檢分析：

本中心多年來陸續接受國內重要學術機構及醫學中心委託，協助處理研究用特殊項目之檢驗分析，獲得信賴。

## Department of Clinical Pathology

The Department of Clinical Pathology is comprised of 3 clinical pathologists, 17 well-experienced senior medical technologists, 1 laboratory technicians, and 4 clerical staff members.

The Clinical Pathology department abides by the requirements of the TAF ISO 15189 accreditation in every aspect of the pre-analytical, analytical and post analytical process. The laboratory participates regularly in local and international proficiency testing and inter-laboratory comparisons for the analysis performed. Over the years we've maintained an excellent record, while at the same time implementing continuous improvement plans to ensure the accuracy of our test results.

The wide array of services offered by the Department of Clinical Pathology includes special and high technology test items. At the same time they collaborate with various hospitals and clinics in centralizing test analysis to conserve medical resources. Testing services mainly include heavy metal testing, newborn screening, and molecular medicine testing. The department is known for its accurate and fast test results, professionalism, and dedicated services. A specimen collection network has been established to pick up specimens from health institutions around Taipei City and New Taipei City. It also provides preventative health care and other laboratory testing-related consultation services.

Two Classifications of Testing Services:

### (1) Biochemistry and Immunology:

1. Heavy Metals Tests: Includes lead (Pb), aluminum (Al), cadmium (Cd), mercury (Hg), copper (Cu), zinc (Zn), and nickel (Ni) testing. Aside from being the Council of Labor Affairs designated certified laboratory for blood Pb level testing, TIP also passed an inspection conducted by the TAF during October 2013. This was done in conjunction with the "Inspection of designated testing laboratory for Occupational Safety and Health," which included several metal testing capabilities such as urine Cd, Hg, Ni, Hg and blood Hg and Pb. Quantitative analysis of heavy metals is the Department's key development test item.
2. Hepatitis markers tests
3. Hormone tests
4. Tumor markers screening
5. Therapeutic drug monitoring
6. Auto-immune disease antibody tests
7. Allergen tests
8. Radioimmunoassay tests
9. General Biochemistry and Hematology tests
10. Assist in Academic Research Institutions' sample

analysis:

For many years now our institute has built trust with several important academic institutions and medical centers in Taiwan for conducting analysis on special research test items.



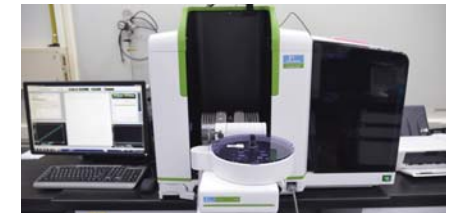
生化免疫組工作團隊  
Team of Biochemical and Immunological Division



放射加瑪計數儀  
r-counter



直接汞濃度分析儀  
DMA



石墨爐原子吸收光譜儀  
GFAAS

### (二)、新生兒篩檢：

衛生福利部早在民國 73 年開始，針對疾病發生率高、有可靠的篩檢方法、治療方法及檢驗成本低的先天性代謝異常疾病，建立了全國性的新生兒先天性代謝異常疾病之篩檢系統，希望對病症能早期發現、早期診斷並開始治療。本中心於民國 82 年接受衛生福利部委託進行新生兒篩檢工作，參與並見證了這項卓越的工作成果。歷年來在國民健康署的監督下，承接國內近三分之一的新生兒篩檢工作，為國內 3 大新生兒篩檢中心之一。同時與臺北市、新北市衛生局合作，負責新生兒聽力篩檢與先天性危急型心臟病篩檢資訊系統管理作業。

篩檢項目包括兩大類，國民健康署指定項目 11 項與選擇性自費項目。

### (2) Newborn Screening:

In 1984 the Ministry of Health and Welfare set an aim to provide reliable and low cost screening tests for high incidence congenital metabolic diseases. It established a nationwide congenital metabolic disorder screening system to diagnose diseases in newborns during the early stages and provide early medical treatment. TIP has been entrusted by The Ministry of Health and Welfare with conducting newborn congenital metabolic screening testing since 1993. Their participation has surpassed all expectations with remarkable achievements. Under the supervision of the Health Promotion Administration, we have been conducting screening tests for almost one third of the newborns, making it one of the three premier screening centers in Taiwan. At the same time, we also work hand-in-hand with the Taipei City Health Department in newborn hearing test screening projects and congenital acute cardiac disease screening systems and management. Listed below are the two classifications of newborn screening tests. The first is the Health Promotion Administration Designated tests and the second is listed as the other Undesignated tests.



指定項目：

1. 先天性甲狀腺低能症 (CHT)
2. 半乳糖血症 (GAL)
3. 葡萄糖 6 磷酸鹽去氫酶缺乏症 (G6PD)
4. 先天性腎上腺增生症 (CAH)
5. 苯酮尿症 (PKU)
6. 高胱氨酸尿症 (HCU)
7. 楓糖尿症 (MSUD)
8. 中鏈輔酶 A 去氫酶缺乏症 (MCAD)
9. 戊二酸血症第一型 (GA-1)
10. 異戊酸血症 (IVA)
11. 甲基丙二酸血症 (MMA)

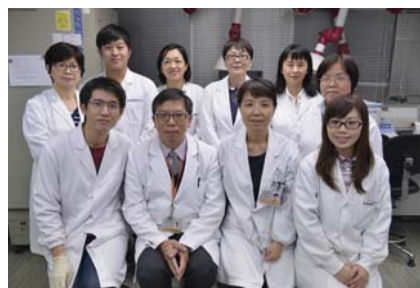
其中第 5 項 ~ 第 11 項是以串聯質譜儀 (Tandem Mass) 檢測之代謝異常疾病，包括先天性胺基酸、有機酸、與脂肪酸之代謝異常疾病，皆可以一個血點，經此高精密度儀器檢驗出多達 20 幾種代謝異常疾病。

非指定項目：

1. 指定項目以外，由串聯質譜儀檢測的胺基酸、脂肪酸與有機酸之代謝異常疾病。
2. 溶小體儲積症之龐貝氏症、法布瑞氏症、高雪氏症與黏多糖症第 1 型。
3. 嚴重複合型免疫缺乏症。

進階篩檢項目：

甲基丙二酸血症 (MMA) 與丙酸血症 (PA)



新生兒篩檢工作團隊  
Team of Newborn Screening

Designated Tests:

1. Congenital hypothyroidism (CHT)
2. Galactosemia (GAL)
3. Glucose 6 phosphate dehydrogenase deficiency (G6PD)
4. Congenital adrenal hyperplasia (CAH)
5. Phenylketonuria (PKU)
6. Homocystinuria (HCU)
7. Maple syrup urine disease (MSUD)
8. Medium-chain acyl-CoA dehydrogenase deficiency (MCAD)
9. Glutaric acidemia type 1 (GA-1)
10. Isovaleric acidemia (IVA)
11. Methylmalonic acidemia (MMA)

Of these designated tests, items 5-11 are tested by using the Tandem Mass Spectrometer to screen newborns for congenital defects, as well as amino acid, organic acid and fatty acid metabolic disorders. This high-precision instrument can test more than 20 types of congenital metabolic disorders from a single blood spot.

Undesignated Tests:

1. Besides the specified test requirements, the Tandem Mass Spectrometry instrument tests amino acids, fatty acids and organic acids in congenital metabolic disorders.
2. Pompe, Fabry, Gaucher, Mucopolysaccharidosis (MPS) type I disease of lysosomal storage diseases.
3. Severe combined immunodeficiency.

Second tier screening tests:

Methylmalonic acidemia and Propionic acidemia.



血片打孔機  
Puncher



自動螢光免疫分析儀  
Autofluo



聚合酶連鎖反應儀  
PCR



串聯質譜儀  
API 2000 LC/MS/MS



高階串聯質譜儀  
API 4000 LC/MS/MS

## 分子醫學部

近年來分子生物學的技術與儀器之發展非常快速，特別是核酸方面的檢驗應用在病理檢測上越來越多。分子醫學實驗室於2005年成立，隔年開始對外服務，隨著業務量的增加與分子檢測需求的快速成長，中心將二樓重新規劃，考慮到核酸檢驗的特殊規格：各區獨立、注意氣流、因地制宜、方便工作。於2010年建構完成高規格的分子醫學實驗室，並配合業務量的增加，添購先進儀器與設備提供高品質精確檢測。並於同年度首度通過TAF認證，2013年完成延展認證。2012也完成台灣病理學會認證的分子醫學實驗室。

目前實驗室有四大方向：

### (一) 病毒學的檢查：

1. B、C型肝炎方面檢測運用：  
使用符合衛生署核可之檢測試劑，提供自動化B、C型肝炎病毒量檢驗及B、C型肝炎病毒基因型與B肝抗變異檢測，供醫師用藥之參考依據。
2. 人類乳突病毒定性檢測。

### (二) 胃幽門螺旋桿菌檢測開發：

提供菌株之基因檢測 (vacA, cagA)，並已開發抗藥性菌株之檢測 (Clarithromycin & Fluoroquinolone resistance gene)。

### (三) 藥物基因學相關檢測：

目前提供由卡巴氮平及安樂普諾等藥物引起的嚴重藥物反應之HLA-B\*57:02及HLA-B\*58:01檢測。此外，也自行開發針對癌症化療用藥Irinotecan代謝有關之基因UGT1A1之多型性，以及酒精代謝相關酵素 (ADH1B, ALDH2) 多型性的基因檢查。

### (四) 癌症標靶藥物相關基因檢測：

乳癌病患組織可利用螢光原位雜交 (FISH) 方法，檢測是否為HER-2/neu基因大量複製狀態；大腸癌組織則分析KRAS、NRAS基因有無突變狀態；肺癌方面是針對非小細胞肺癌 (NSCLC) 組織之EGFR基因是否有突變情況，另外也可利用螢光原位雜交 (FISH) 方法，檢測肺癌ALK基因是否與EML4基因產生錯位。我們也建立黑色素細胞癌 (melanoma) BRAF基因突變的檢查。以上各項檢驗結果目的，均是作為使用各式癌症標靶藥物之參考依據。

## Department of Molecular Medicine

Recently there have been rapid advancements in molecular biology, especially in nucleic acid testing. It has been widely applied to several pathology disease tests. In 2005, the Molecular Medical Lab was established and began clinical operations the following year. As the cases and the demand for molecular testing increased, the second floor of the laboratory was renovated to accommodate an independent molecular medicine laboratory. With specifications conforming to the strict requirements of a molecular biology lab, it was completed in 2010 equipped with advanced instruments and an independent working area, with the correct specified airflow able to provide high quality and accurate tests. In the same year, our molecular medicine lab obtained its initial accreditation by TAF (Taiwan Accreditation Foundation, ISO 15189) and renewal of accreditation was done in 2013. In 2012 our lab was also certified by the Taiwan Society of Pathology as a molecular pathology laboratory.

Currently, there are four major points of focus for the lab.

### (1) Virology tests:

#### 1. Hepatitis B and C test applications:

Using in vitro diagnostic reagent kits approved by the Department of Health (now Ministry of Health and Welfare), real-time PCR methods for hepatitis B & C viral load testing, hepatitis B & C genotype testing and hepatitis B drug-resistant mutation testing can be done to provide reference for physicians in the treatment of infected patients.

#### 2. Currently provides in vitro diagnostic (IVD) reagent for HPV genotyping including high risk, low risk, and genotype 16&18.

### (2) *Helicobacter pylori* bacteria tests development:

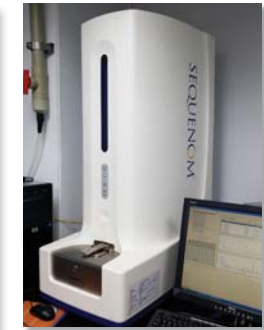
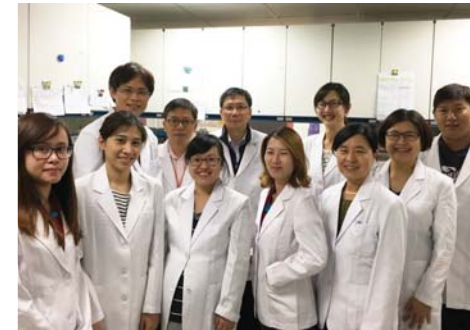
Provides testing for *H. pylori* strains (gene vac A, cag A) and testing for antibiotic resistant strains (Clarithromycin & Fluoroquinolone resistance gene)

### (3) Pharmacogenetic related tests:

Currently provides HLA-B\*57:02 and HLA-B\*58:01 (IVD reagents) testing for serious drug reactions induced by carbamazepine and allopurinol. We also use laboratory developed test for detecting UGT1A1 polymorphism for colorectal cancer chemotherapy, and detecting ADH1B and ALDH2 polymorphism for alcohol metabolism.

### (4) Genetics testing for cancer target therapy:

Breast cancer tissue testing, using the fluorescence in situ hybridization (FISH) technique, is used to confirm the presence of HER2/neu gene amplification. In colorectal cancer tissues, the presence of a mutation in the KRAS and NRAS gene can also be detected. The presence of mutations in the EGFR gene of Non-small Cell Lung Cancer (NSCLC) cells is tested in lung cancer patients. Moreover, the FISH method uses the ALK gene rearrangement with the EML4 gene in non-small cell lung cancer. For melanoma, the BRAF mutation test is also tested by using laboratory developed test. All those testing results are references for the cancer target therapy.



介質輔助雷射脫附離子化質譜儀  
Matrix-Assisted Laser Desorption/Ionization  
Time Of Flight Mass Spectrometer,  
MALDI-TOF MS



及時定量 PCR 系統  
Real-time PCR



自動化核酸萃取與檢體製備系統  
Automatic nucleic acid extractor and  
sample preparation system



焦磷酸定序技術系統  
Pyrosequencing system



自動化核酸萃取儀  
Automatic nucleic acid extractor



## 教學與訓練

本中心對內主要為提升員工職能與身心健康所舉辦的各種活動與訓練課程，對外則是提供醫院及相關研究單位進行學術研究及技術開發計畫。經常舉辦演講活動，除了主要邀請醫療相關領域之專業人員來中心演講外，並穿插藝文、資訊、生活等相關議題之演講；另外每年舉辦年度中心訓練，參觀先進醫療單位設施與儀器，邀請國內外著名大學、醫院之教授、醫師、醫檢師進行專題演講。

積極參加國內外相關之學術研討會議，吸收新知並與國際接軌。本中心每年編有學術研究預算，提供台北市立聯合醫院及其他教學研究醫療單位有志從事學術研究之醫師提供申請管道，經過專家學者審核通過後提供經費補助；另外中心也與其他醫療研究單位合作，除了研究成果發表於國外著名醫學雜誌外，並開發擴展中心服務項目，增加業務。



## Research and Education

The Taipei Institute of Pathology mainly aims to upgrade the employees' occupational abilities. Physical and mental health is also maintained by regularly holding all sorts of training courses and activities. The department also participates and conducts academic research projects in cooperation with hospitals and other related research units. Besides inviting experts in the medical field to conduct medically-related lectures, other topics such as arts and lifestyle-related lectures are also arranged. In addition, the annual training that is conducted includes: visitations to medical institutions and their advanced facilities; and listening to lectures given by various professionals such as, professors, doctors, and medical laboratory scientists, who come from renowned international and local universities and hospitals.

We also participate in domestic and international academic meetings and conferences in order to keep updated on the latest knowledge and to meet international standards. Each year the TIP allocates a certain amount of their budget to those physicians from the Taipei City hospitals and other research hospitals, who are interested in conducting academic research. First an application is filed and then it is reviewed and approved by experts in the field. Not only is research conducted in cooperation with other medical research units, but the publication of the research results in international medical journals provides TIP with the opportunity to extend its testing services and in the process increase its business opportunities.



## 我們的網站

病理中心有專屬網站為員工與客戶提供更有效率之互動與服務。該網頁除了提供最新的訊息之外，在專業領域有各檢驗項目與結果的查詢，亦有專區可供採檢手冊及申請表單之下載。

## Our Website

The Taipei Institute of Pathology has a specially designed website that provides an effective tool for interaction and service between its staff and clients.

Aside from providing the latest information, the website also allows healthcare personnel to browse for information regarding various test analyses and result query. A specimen collection manual and various application forms are available for downloading if needed, providing convenience to the clients.

網址 < <http://www.tipn.org.tw> >



## 我們的服務項目 Items of Examination

### 解剖病理 / Anatomical Pathology

#### ◆ 外科病理 / Surgical Pathology

病理切片 / Surgical biopsy  
冷凍切片 / Frozen section  
免疫組織化學染色 /  
Immunohistochemistry staining  
乳癌基因擴增試驗 /HER2 Dual ISH  
蠟塊代製業務 / Paraffin-embedding tissue service

#### ◆ 細胞病理 / Cytological Pathology

子宮頸抹片檢查 / Cervical smear  
薄層抹片檢查 / Liquid based thin smear  
非婦科抹片體液檢查 /  
Non-gynecological body fluid cytology  
非婦科穿刺細胞檢查 /  
Non-gynecological needle aspiration cytology  
人類乳突病毒 DNA 檢測 /  
Human papilloma virus DNA testing

### 臨床病理 / Clinical Pathology

#### ◆ 一般生化檢查 / Routine Biochemistry

#### ◆ 一般血液檢查 / Routine Hematology

#### ◆ 葡萄糖 -6- 磷酸脫氫酶 / G-6-PD

#### ◆ 甲狀腺功能 / Thyroid Function

四碘甲狀腺素 / T4  
三碘甲狀腺素 / T3  
三點甲狀腺原氨酸攝取率 / T3 uptake  
游離甲狀腺素 / Free T4  
游離甲狀腺素分析 / FTI  
甲狀腺刺激素 / TSH  
甲促素結合抗體 / TSH Receptor Ab  
抗甲狀腺過氧化酶抗體 / Anti-TPO Ab  
甲狀腺體蛋白抗體 / Anti-Tg

#### ◆ 副甲狀腺素 / PTH-Intact

#### ◆ 性荷爾蒙 / Sex Hormone

二氫基春情素 / E2 Estradiol  
春情素醇 / E3 Estrinol  
濾泡刺激素 / FSH  
黃體化激素 / LH  
催乳素 / Prolactin  
絨毛膜促性腺激素 - 乙亞單體 /  $\beta$ -HCG  
脫氫異雄酮 / DHEAS  
黃體脂酮 / Progesterone  
辜丸脂醇 / Testosterone

#### ◆ 腦下垂體荷爾蒙 / Pituitary hormones

促腎上腺皮質素 / ACTH

#### ◆ 腎上腺素荷爾蒙 / Adrenal hormones

皮質醇 / Cortisol  
醛固酮 / Aldosterone  
腎泌素 / Renin (PRA)  
氫氣旋基醋酸 / 5-HIAA  
17 酮類固醇類 / 17-ketosteroids  
17 氫氧根腎上腺酮 / 17-OHCS  
香莖杏仁酸定量 / VMA  
鄰苯二氮氣 / Catecholamines

#### ◆ 胃泌素 / Gastrin

#### ◆ 糖尿病 / Diabetes Mellitus

血糖 / Glucose  
糖化血色素 / HbA1c  
胰島素 / Insulin  
C- 胜狀胰島素 / C-Peptide

#### ◆ 血脂 / Lipids

中性脂肪 / Triglyceride  
膽固醇 / Cholesterol  
高密度膽固醇 / HDL-Cholesterol  
低密度膽固醇 / LDL-Cholesterol  
脂蛋白素原 A1, B / Apo A1, B

#### ◆ 心臟酶素 / Cardio enzyme

乳酸脫氫同功酶 / LDH-Isoenzyme  
肌酸磷酸同功酶 / CPK-Isoenzyme

#### ◆ 貧血檢查 / Anemia

血清鐵 / Serum Iron  
總鐵結合能 / TIBC  
鐵蛋白 / Ferritin  
血色素電泳 / Hemoglobin EP  
維他命 B12 / Vitamin B12  
葉酸 / Folate

#### ◆ 肝炎標識 / Hepatitis marker

B 型肝炎表面抗原 / HBsAg  
B 型肝炎表面抗體 / Anti-HBs Ab  
B 型肝炎 e 抗原 / HBeAg  
B 型肝炎 e 抗體 / Anti-HBe Ab  
B 型肝炎核心抗體 / Anti-HBc Ab  
B 型肝炎核心抗體免疫球蛋白 M / Anti-HBc IgM  
A 型肝炎抗體 / Anti-HAV Ab  
A 型肝炎抗體免疫球蛋白 M / Anti-HAV IgM  
C 型肝炎抗體 / Anti-HCV Ab

#### ◆ 血清免疫 / Serology and Immunology

滲透壓 / Osmolarity  
前降鈣素元 / Procalcitonin  
原生 B 型利納太 / NT-proBNP  
細胞間質抗體 / Anti-Interacellular Substance Ab  
基底膜帶抗體 / Anti-Basement Membrane Zone Ab  
抗腎絲球基底膜抗體 /  
Anti-Glomerular Basement Membrane Ab  
抗中性粒細胞質抗體 /  
Anti-Neutrophil Cytoplasmic Ab  
壁細胞抗體 / Anti-Gastric Parietal Cell Ab  
抗心脂抗體 / Anti-Cardiolipin IgG, IgM  
乙酰膽鹼抗體 / Acetylcholine receptor Ab  
免疫球蛋白 G / IgG  
免疫球蛋白 A / IgA  
免疫球蛋白 M / IgM  
免疫球蛋白 D / IgD  
免疫球蛋白 E / IgE  
特異性免疫球蛋白 E (過敏原) /  
Specific IgE (Allergen)  
血液補體 3 / C3  
血液補體 4 / C4  
抗核抗體 / ANA  
去氧核糖核酸抗體 / Anti-DNA Ab  
可抽取的核抗體 / Anti-ENA Ab  
Anti-RNP / Anti-Sm / Anti-SSA / Anti-SSB /  
Anti-Scl 70 / Anti-Centromere / Anti-Jo 1  
粒線體抗體 / Anti-Mitochondrial Ab  
平滑肌抗體 / Anti-Smooth muscle Ab  
轉銅素 / Ceruloplasmin  
血清蛋白電泳 / Serum protein EP  
免疫電泳 / Immuno Fixation EP  
類風濕因子 / RF  
抗環狀瓜氨酸化抗體 / Anti-CCP Ab  
抗鏈球菌溶血素 O 效價 / ASLO  
C- 反應性蛋白試驗 / CRP

#### ◆ 細菌與病毒抗體

德國麻疹免疫球蛋白 G / Rubella IgG  
德國麻疹免疫球蛋白 M / Rubella IgM  
單純疱疹病毒型 I 抗體 / HSV type I Ab  
單純疱疹病毒型 II 抗體 / HSV type II Ab  
單純疱疹免疫球蛋白 M / HSV IgM  
巨細胞病毒抗體 / CMV IgG  
巨細胞病毒免疫球蛋白 M / CMV IgM  
弓漿蟲抗體 / Toxoplasma Ab  
弓漿蟲免疫球蛋白 M / Toxoplasma IgM  
EB 病毒囊鞘免疫球蛋白 G / EB-VCA IgG  
EB 病毒囊鞘免疫球蛋白 A / EB-VCA IgA  
EB 病毒囊鞘免疫球蛋白 M / EB-VCA IgM  
帶狀泡疹 (水痘) 病毒抗體 / VZV IgG  
披衣菌抗體 / Chlamydia IgG, IgM  
麻疹病毒抗體 / Measles IgG, IgM  
幽門桿菌抗體 / HEL-P Ab

#### ◆ $\beta$ 2- 微球蛋白 / $\beta$ 2-Microglobulin

#### ◆ 重金屬檢查 / Heavy metals

鉛 / Lead  
銅 / Copper  
鎳 / Nickel  
鋅 / Zinc  
鋁 / Aluminum  
汞 / Mercury  
鎘 / Cadmium  
鋰離子 / Lithium

#### ◆ 藥劑及麻醉毒物 / Drugs and Narcotics

Digoxin  
Theophyllin  
Phenytoin  
Carbamazepine  
Valproic Acid  
Phenobarbital  
Vancomycin  
Ethanol  
Methanol  
Amphetamine  
Pencyclidine  
Morphine  
Cannabinoid  
Cocaine

#### ◆ 癌症標識 / Tumor marker

癌胚胎抗原 / CEA  
 $\alpha$ - 胎兒蛋白 / AFP  
CA-125 標記 / CA 125  
CA-199 標記 / CA 199  
CA-153 標記 / CA 153  
SCC 標記 / SCC  
攝護腺酸性磷酸酶 / Prostate Acid P  
游離攝護腺特異抗原 / 攝護腺特異抗原 /  
Free PSA / PSA

#### ◆ 專案委託項目

IL-1 $\alpha$ 、IL-1 $\beta$ 、IL-4、IL-6、IL-8、IL-10、IL-27、  
TNF- $\alpha$ 、IFN- $\alpha$ 、IFN- $\gamma$ 、BDNF、Ghrelin、  
Leptin、Adiponectin、  
Orexin A、RBP-4、8-OHdG、Angiotensin II、IGF-  
1、IGF-2、sIL-6 R

#### ◆ 新生兒篩檢 / Newborn Screening

國民健康署指定項目 / newborn screening tests  
designated by Health Promotion Administration  
先天性甲狀腺低能症 /  
Congenital Hypothyroidism, CHT  
半乳糖血症 / Galactosemia, GAL

葡萄糖 6 磷酸鹽去氫酶缺乏症 / Glucose-6-  
Phosphate Dehydrogenase Deficiency, G6PD  
先天性腎上腺增生症 /  
Congenital Adrenal Hyperplasia, CAH  
苯酮尿症 / Phenylketonuria, PKU  
高胱氨酸尿症 / Homocystinuria, HCU  
楓糖尿症 / Maple Syrup Urine Disease, MSUD  
中鏈醣輔酶 A 去氫酶缺乏症 / Medium Chain Acyl-CoA  
Dehydrogenase Deficiency, MCAD  
戊二酸血症第一型 /  
Multiple Acyl-CoA Dehydrogenase Deficiency, GA-I  
異戊酸血症 / Isovaleric Acidemia, IVA  
甲基丙二酸血症 / Methylmalonic Acidemia, MMA

#### ◆ 串聯質譜儀非指定項目 / tandem mass tests

undersigned by Health Promotion Administration  
酪胺酸血症 / Tyrosinemia  
瓜胺酸血症 / Citrullinemia  
精胺酸血症 / Argininemia

高氨血症 / Hyperammonemia Hyperornithinemia  
Homocitrullinuria, HHH Syndrom  
短鏈脂肪酸症候群 / Short Chain Acyl-CoA  
Dehydrogenase Deficiency, SCAD  
長鏈脂肪酸症候群 / Long Chain hydroxyl Acyl-CoA  
Dehydrogenase Deficiency, LCHAD  
極長鏈脂肪酸症候群 / Very Long Chain Acyl-CoA  
Dehydrogenase Deficiency, VLCAD  
肉鹼穿透障礙 /

Carnitine-acylcarnitine Translocase Deficiency  
肉鹼吸收障礙 / Carnitine Transporter Defect  
肉鹼結合酵素缺乏症 /  
Carnitine Palmitoyl Transferase Deficiency  
戊二酸血症第二型 /  
Multiple Acyl-CoA Dehydrogenase Deficiency, GA-II  
3- 甲基巴豆醣輔酶 A 缺乏症 / 3-Methylcrotonyl -  
CoA Carboxylase Deficiency, 3-MCC  
3- 羥基 -3- 甲基戊二酸尿症  
/ 3-Hydroxy-3-Methylglutaric Aciduria, HMG

#### ◆ 溶小體儲積症 / Lysosomal storage diseases

龐貝氏症 / Pompe disease  
法布瑞氏症 / Fabry disease  
高雪氏症 / Gaucher disease  
黏多糖症第一型 / MPS-I

#### ◆ 嚴重複合型免疫缺乏症 /

Severe Combined Immunodeficiency, SCID

### 分子醫學檢驗 / Molecular Medicine Testing

#### ◆ 癌症標靶藥物相關基因檢測 /

Genetic testing for cancer target therapy testing  
乳癌 HER-2 螢光原位雜交 /  
HER-2 Fluorescence *in situ* hybridization testing  
肺癌 ALK 螢光原位雜交 /  
ALK Fluorescence *in situ* hybridization testing  
肺癌 EGFR 基因突變檢測 /  
EGFR gene mutation testing  
大腸癌 KRAS, NRAS 基因突變檢測 /  
KRAS and NRAS gene mutation testing  
黑色素細胞瘤 BRAF 基因突變檢測 /  
BRAF gene mutation testing

#### ◆ B、C 型肝炎病毒量檢驗 /

Hepatitis B & C viral load testing

#### ◆ 藥害基因 HLA-B1502 及 HLA-B5801 及 UGT1A1\*28 檢測 /

Pharmacogenetic related gene: HLA-B1502 testing ,  
HLA-B5801 testing and UGT1A1\*28 testing  
◆ 人類乳突病毒定性檢測 / HPV testing  
◆ 酒精代謝檢驗 / ALDH2 and ADH1B testing





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# Taipei Institute of Pathology

專業 責任 熱忱 效率



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