

## Professor Lü Renhe' s Clinical Experience in Treating Chronic Renal Failure with Ganoderma and Rhodiola

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### Abstract

Chronic renal failure represents the final outcome of the continuous progression of various kidney diseases, featuring multiple complications and poor prognosis. Modern medicine primarily employs symptomatic treatment, and upon progression to end-stage renal disease, only dialysis or kidney transplantation remain as viable therapeutic options, which entail enormous expenditures and impose a heavy societal burden. Professor Lü Renhe possesses extensive experience in utilizing two medicinal herbs, *Ganoderma lucidum* (Lingzhi) and *Rhodiola rosea* (Hongjingtian), for the treatment of chronic renal failure. Therefore, this article summarizes and expounds upon Professor Lü Renhe' s clinical experience in medicinal application.

### Full Text

## Professor Lyu Renhe' s Clinical Experience in Treating Chronic Renal Failure with Ganoderma Lucidum and Rhodiola Rosea

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### Abstract

Chronic renal failure represents the final outcome of progressive kidney diseases, characterized by multiple complications and poor prognosis. Modern medicine primarily employs symptomatic treatment, with end-stage renal disease requiring dialysis or kidney transplantation at enormous cost and heavy social burden. Professor Lyu Renhe possesses extensive experience in treating chronic renal failure with *Ganoderma lucidum* and *Rhodiola rosea*. This paper summarizes and elucidates Professor Lyu's clinical experience with these medicinals.

**Keywords:** Chronic renal failure; *Ganoderma lucidum*; *Rhodiola rosea*; @Lyu Renhe; clinical experience

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### Introduction

Chronic renal failure (CRF) refers to a series of symptoms or metabolic disorders resulting from progressive renal impairment on the basis of various primary or secondary kidney diseases [1]. With diverse clinical manifestations, it represents the final outcome of progressive kidney diseases, featuring multiple complications and poor prognosis. Modern medicine primarily employs symptomatic treatment, and once the condition reaches end-stage, only dialysis and kidney transplantation remain as options—approaches that are prohibitively expensive, impose heavy burdens on public health systems, and severely compromise patients' quality of life in their final stages. Therefore, investigating the medication experience of renowned senior Traditional Chinese Medicine (TCM) practitioners in treating chronic kidney disease holds significant importance.

Professor Lyu Renhe, awarded the title of “National TCM Master” in 2017, serves as an instructor for national inheritance programs of veteran TCM experts and for postdoctoral TCM heritage programs. He is also the founder and academic leader of the Nephrology and Endocrinology Department at Dongzhimen Hospital of Beijing University of Chinese Medicine. With profound scholarship and rich clinical experience, Professor Lyu has developed distinctive academic characteristics and unique expertise in treating chronic renal failure. He advocates the principle of “making the past serve the present and foreign things serve China” in clinical practice, established the pathological theory of “micro-zhengjia” in nephropathy, and promotes the clinical thinking of “six corresponding treatment strategies.” This paper employs theoretical discussion combined with data mining methods to summarize Professor Lyu's clinical experience in using *Rhodiola rosea* and *Ganoderma lucidum* for chronic renal failure.

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## 1. “Making the Past Serve the Present and Foreign Things Serve China” : Expanding the Application Range of Medicinals

Professor Lyu emphasizes the importance of studying TCM classics to inherit excellent experience from predecessors while actively learning modern pharmacological knowledge to understand medicinal mechanisms, thereby expanding the application range of traditional drugs.

*Ganoderma lucidum*, the dried fruiting body of the polyporaceae fungus *Ganoderma lucidum* (Leyss. ex Fr.) Karst. or *Ganoderma sinense* Zhao, Xu et Zhang, was first recorded in the *Shen Nong Ben Cao Jing* (Shen Nong’s Classic of Materia Medica). The classic categorizes it into six types according to the five organ colors: green, red, yellow, white, black, and purple. The red type is said to benefit heart qi and tonify the middle; the black type to promote water metabolism and benefit kidney qi; the green type to brighten vision and tonify liver qi; the white type to benefit lung qi; the yellow type to tonify spleen qi and calm the spirit; and the purple type to benefit essence qi and strengthen sinews and bones. All types are considered bland, neutral, and non-toxic, classified as “superior grade” medicinals in the classic, suitable for long-term consumption to prolong life. Professor Lyu believes that *Ganoderma* can tonify deficiencies of essence qi in the five organs—heart, lung, spleen, liver, and kidney. Considering the characteristics of chronic renal failure, where patients typically suffer from prolonged disease courses with internal accumulation of blood stasis and turbid toxins that damage the five organs and deplete essence qi, employing *Ganoderma* alone can nourish essence qi across all five organs, achieving multiple therapeutic effects with a single medicinal. Pharmacological research indicates [2,3] that *Ganoderma* polysaccharides can enhance antioxidant capacity, inhibit lipid peroxide formation, boost immunity, and provide anti-aging effects. They also regulate immunity, lower blood glucose and lipids, and exhibit anti-lymphoma properties. Other components in *Ganoderma* demonstrate sedative, cardiogenic, and anticoagulant effects. Integrating modern pharmacological findings, Professor Lyu considers *Ganoderma* to hold significant value in treating chronic renal failure, as it not only enhances patient immunity but also confers protective effects against kidney injury [4].

The *Shen Nong Ben Cao Jing* records *Rhodiola rosea* as “bitter and neutral, treating great heat, fire sores, bodily heat and irritability, and evil qi.” Later generations recognized its ability to tonify lung qi and activate blood circulation to remove stasis. Modern research demonstrates that *Rhodiola* can dilate blood vessels, improve blood flow, reduce blood viscosity, and provide antioxidant effects, exhibiting significant anti-aging, anti-hypoxia, and anti-fatigue properties. It has been widely applied in cardiovascular and cerebrovascular conditions as well as for preventing altitude sickness with favorable outcomes [5,6]. Integrating classical theory with modern pharmacological research, Professor Lyu believes that employing *Rhodiola* in chronic renal failure patients not only enhances immunity but also addresses the common complication of renal anemia. With insufficient hemoglobin levels, patients exist in a state of chronic

hypoxia. Since *Rhodiola* can counteract altitude sickness by dilating vessels and improving blood flow, it can similarly ameliorate patients' chronic ischemic and hypoxic conditions, providing substantial benefit in relieving fatigue symptoms associated with chronic renal failure.

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## **2. Establishing the “Micro-Zhengjia” Academic Theory of Nephropathy to Guide Clinical Application**

Professor Lyu Renhe posits that pathological changes in renal collaterals constitute the foundation for “micro-zhengjia” formation [7], with “micro-zhengjia” representing the fundamental pathological state of kidneys in chronic renal failure patients. Physiologically, the kidney stores essence, governs water metabolism, and receives qi. Like other organs, it also facilitates qi and blood circulation, with renal collaterals serving as the fundamental pathways for this circulation as well as entry points for external pathogenic factors. Invasion by external pathogens or prolonged disease entering the collaterals can cause collateral obstruction, impeding normal qi and blood flow. This stagnation leads to qi stagnation, phlegm obstruction, and blood stasis, which combined with external pathogens may manifest as pathogenic factors like phlegm-dampness and heat-toxins. These stagnate in renal collaterals, further hindering the ascending, descending, entering, and exiting of qi movement. Thus, blood stasis obstructing collaterals emerges as a crucial link in micro-zhengjia pathogenesis, while organ essence qi inevitably sustains damage. The fundamental treatment principle should therefore involve tonifying deficiency and resolving stasis. Professor Lyu's clinical employment of *Ganoderma* and *Rhodiola* exemplifies this therapeutic approach, with *Ganoderma* tonifying organ deficiencies and *Rhodiola* activating blood circulation to remove stasis—two medicinals that complement each other synergistically.

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## **3. Integrating Data Mining Methods to Explore “Stage-Based Disease Treatment” Clinical Thinking**

The concept of “six corresponding treatment strategies,” proposed by Professor Lyu Renhe in the early 1990s, encompasses six clinical approaches: (1) treating according to symptoms, (2) treating according to symptom pattern differentiation, (3) combining disease and pattern differentiation based on symptoms, (4) treating according to disease, (5) treating according to disease pattern differentiation, and (6) treating according to disease stage pattern differentiation—abbreviated as “six corresponding treatment strategies.” This paper employs data mining methods to explore underlying patterns in Professor Lyu's “stage-based disease treatment” clinical thinking.

“Disease stage pattern differentiation treatment” represents the most distinctive approach within Professor Lyu's “six corresponding treatment strategies,” partic-

ularly applicable to chronic and complex diseases. “Stage differentiation” refers to employing modern laboratory and imaging indicators, drawing upon Western medical disease staging criteria to clarify disease phases and progression. “Pattern differentiation” involves, on the basis of stage identification, applying differential diagnosis and treatment for each stage, embodying the flexible and dynamic nature of TCM.

Professor Lyu treats chronic renal failure according to four stages based on Western clinical staging: compensation stage, decompensation stage, failure stage, and uremia stage. The authors selected 73 patients with confirmed CRF diagnoses who visited Professor Lyu’s outpatient clinic between June 2015 and June 2017, comprising a total of 166 visits. The frequency of Ganoderma and Rhodiola usage was analyzed according to these four CRF stages, with results as follows:

[Figure 1: see original paper] Analysis of Medication Frequency of Ganoderma Lucidum and Rhodiola Rosea

As shown in [Figure 1: see original paper], the frequency of Ganoderma and Rhodiola usage by Professor Lyu gradually increased from the compensation stage through the uremia stage of chronic renal failure. Chronic renal failure is rooted in the decline of kidney yuan (primary essence) with impaired qi transformation and internal retention of turbid toxins and blood stasis as the branch manifestations. Professor Lyu’s emphasis on disease staging arises because as the condition progresses, disease severity undergoes dynamic changes, with pathological products such as turbid toxins and blood stasis continuously accumulating and obstructing qi movement. This further exacerbates damage to the kidney’s genuine qi. Consequently, as the disease advances, the tonifying and blood-activating effects represented by Ganoderma and Rhodiola must be progressively strengthened. Based on these data mining results, we can further extrapolate that Professor Lyu’s concept of “disease stage pattern differentiation treatment” encompasses not only differential formula selection according to disease stages but also, implicitly, incorporates staging factors into specific medicinal choices.

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## Conclusion

In summary, Professor Lyu Renhe’s distinctive approach to treating chronic renal failure with Ganoderma and Rhodiola integrates classical medicinal property theory with modern pharmacological research, combined with the nephropathy “micro-zhengjia” theory, all guided by the clinical thinking of “stage-based disease treatment.” Furthermore, this paper’s employment of data analysis to organize Professor Lyu’s medical records not only validates his clinical experience with Ganoderma and Rhodiola but also, through objective data analysis, further elucidates the connotations of his “stage-based disease treatment” academic thought, holding significant research value.

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