AN OLD ENGLISH PHARMACY

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A feature article titled "About an Old English Pharmacy" appeared in an 1895 issue of *The Chemist and Druggist* (1). By that time, Randall & Son Chemist and Druggist, 146 High Street, Southampton, England, had been a well-respected establishment for over a century. Forty-five years later, a Luftwaffe raid totally destroyed the premises and ended this business after over 150 years of continuous operation.

Randall & Son participated in the vast changes in the profession and its business model during the late eighteenth and especially during the first half of the nineteenth century. In the seventeenth century, a "tripartite system" of medicine was comprised of apothecary-surgeon-physician—in increasing order of status (2). While surgeons and physicians focused on diagnosis and treatment, apothecaries formulated and sold medicines to the public and medical practitioners. To control unauthorized entrants to the field and to better assure quality, The Worshipful Society of Apothecaries was founded in 1617 and received the Royal Charter. It exists and remains active today (3). In 1671 the Society established a major facility for manufacturing drugs that functioned for two and one-half centuries until it closed in 1922 (3). Although there was widespread quackery in the medical professions during the seventeenth century (4), this facility helped the populace gain a degree of confidence in the drugs it was purchasing. Apothecaries also began dispensing medical advice as well as drugs, especially for those who could not afford to visit surgeons

and physicians. A lawsuit filed by the Society against the Royal College of Physicians (the Rose Case) established that "...from 1704 apothecaries enjoyed the legal right to give medical advice... so long as they charged only for the medicines" (5). Gradually many apothecaries evolved to diagnose and provide drugs to patients—precursors to the modern general practitioner. The Apothecaries Act of 1815, which did not include druggists and chemists, and the Medical Act of 1858 introduced rules relating to training, licensing and practice (6). In 1841, the founding of the Pharmaceutical Society established schools of pharmacy and the Pharmacy Acts of 1852 and 1858 established standards for training and testing of new apothecaries (6). By mid-nineteenth century, organic chemistry had begun to emerge as a precise science and this led to isolation of natural drugs such as morphine and quinine and synthetic drugs such as diethyl ether and chloroform. The contemporary chemists and druggists needed to become familiar with the principles and methods of organic chemistry.

The 1895 article describes the establishment of this pharmacy, by William Randall, an apothecary, and assigns an approximate start date of 1795 (1) although 1793 appears more likely (7, 8). The founder, son of John Randall, an organist and Cambridge professor of music (8), "broke family tradition by going into trade" (9). He started in London as a druggist, was cheated by his business partner and relocated to Southampton in 1792 with his wife Sandra Mayor and two small children—John who eventually became a surgeon, while the younger

son died in infancy (8). The article includes contemporary illustrations of the storefront (Randall & Son Pharmaceutical Chemists, Figure 1) as well as William Brodribb Randall, grandson of the founder. There is also a portrait of the founder in an 1900 issue commemorating the pharmaceutical business at the end of the nineteenth century (10). In 1795, Randall published a pamphlet: *Medical Observations Adapted to the Medicine-Chests, Fitted Out by William Randall, Chemist* (11). This retail pharmacy was "...the haunt of the 'nobility and gentry' of the neighborhood since George the Fourth was King, and here are any day to be met with members of the best county families and heads of great mercantile houses, who resort thither for that which will make them well"

(1). George IV and his brother Frederick, the Duke of York, were regular customers and consumers of Randall's "anodyne opodeldoc" (more on that later) (1, 9). William Randall's daybook (10) of 1799-1800 lists items sold during the period. Powdered rhubarb sold for 6 shillings/ oz. "Hyrudines," a polite term for leeches (subclass Hirudinea in the phylum Annelida), sold for 6 pence each. The daybook confirmed to the

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Figure 1. Illustration of the storefront of Randall & Son Pharmaceutical Chemists, 146 High Street, Southampton around 1895. (See Ref. 1.)

journal that "apothecaries trespassed on the province of the vintner by selling wines, on the ground that they were used for medicinal purposes" (10).

William Randall's first wife died, he married again, moved to Fareham, died in 1838 and was buried in Southampton (8). His third son Edward Mayor Randall (born 1794) took over the business (1). Randall the younger was one of the founders of the aforementioned Pharmaceutical Society in 1841. William Randall's grandson, William Brodribb Randall (born 1821), was sixteen when he began an apprenticeship with his father. He enjoyed close contact with Michael Faraday and William Thomas Brande, attended Thomas Graham's chemistry lectures at University College in London in 1843 (1, 9), and gained Graham's first silver medal for chemistry (12). He joined the business in May 1845 and took it over following the

death of his father in 1867 (8). William Brodribb was the person primarily interviewed for the 1895 article.

By 1895, a large basement area as well as a top floor served as storage. The back shop had become a saloon added on to the pharmacy. A "very complete manufacturing laboratory" still existed in the back area of the shop reflecting wholesale trade with druggists, and sales to medical practitioners and regular customers. Until the 1860s the shop had typically trained apprentices for five-year periods, taking on one new apprentice each year and thus maintaining five at any one time. However, William Brodribb noted that the growing need to train extensively in both the increasingly sophisticated chemistry and

business conflicted with his own time pressures and he had to cease this source of income for the business. Also interviewed was an employee, a forty-five-year veteran of the Randall pharmacy, engaged in the process of making black-currant lozenges (1):

Yes sir; I learnt off an old hand who got it off Grandfather Randall when he was a boy. 'Twas Grandfather Randall first made the black currants.

But they made 'em different when I came in. They rolled out the lozenge-paste and hung it up to dry, then cut it out in squares with scissors like. I have to make 'em yet, y'see, for some old customers.

Sadly, none of William Brodribb's four sons had any interest in joining the family business. They pursued careers as a doctor, a solicitor, an electrical engineer, and purveyor of aerated waters on the Isle of Wight. Thus, in 1894 he took on Harry Wilson, F.I.C., F.C.S., as a partner (1), and retired on December 31, 1898. The March 22, 1902 issue of *The Chemist and Druggist* (7) reports the death of William Brodribb Randall (age 81).

Harry Wilson brought new energy and entrepreneurial zeal to the venerable Randall establishment. The 1895 visit by *The Chemist and Druggist* may well have been arranged by the publicity-conscious junior partner shortly

after joining Randall. Having passed the Major examination of the Pharmaceutical Society in 1885, Wilson had been employed in the laboratory of James Woolley, Sons & Co. in Manchester and rose to manager. Woolley had earlier been an associate of John Dalton. Upon the passing of Randall, Wilson formed a limited liability company, Randall & Wilson, Ltd. The seven signatories were

all pharmaceutical chemists and Wilson assumed the position of Managing Director, holding the majority of ordinary shares. A year earlier, Wilson introduced the pharmacy into a new venture "... practically the only firm of whole sale druggists in England who manufacture methylated spirit" (13, 14). Methylated spirit is alcohol denatured with wood naphtha (toxic methyl alcohol). In order to add space for the manufacture of methylated spirit, the pharmacy purchased the Zion Chapel, constructed of Portland stone, on Lansdowne Hill, itself the site of the former

keep (fortified tower) within a castle erected after the Norman invasion (8, 15). In order to store numerous barrels of alcohol, the new owner converted the galleries and rebuilt the floors to hold enormous weight, equipping the storage space with a huge hoist (15). During his career, Wilson achieved numerous appointments and honors in the professional and business communities. Upon his retirement in 1927 his memberships in the British Association for the Advancement of Science and the Royal Southampton Yacht Club were duly noted (9). Randall & Wilson, Ltd later purchased Rayson & Co., Chemists in Ringwood with records dating from 1935 through 1972 (8, 16). A Herbert Richard Hussey, living in Southampton, was next associated with the firm during the 1930s (8). Harry Wilson, F.I.C., Ph.C., died in 1941 (17). Before returning to 146 High Street, let us revisit William Randall's late-eighteenth-century pharmacy.

William Randall's 1795 pamphlet (11) lists the 32 medications included in his commercial medicine-chest,

the preparations to be made from them and the recommended dosages. Although Randall & Sons had a well-heeled clientele including King George IV, Randall took pride in the broader societal mission for his pharmacy: "To relieve the wants of the industrious poor." He advises in his Introduction: "When medical assistance can be had, it should be preferred; but disorders attack suddenly, and

Table 1. List of medications in the Randall & Son medicine chest (11).

- 1. Calcined Magnesia 17. Goula
- 2. Turky Rhubarb
- 3. Powder of Bark
- 4. Tincture of Bark
- 5. Essence of Rhubarb
- 6. Spirits of Sal Volatile
- 7. Nervous Drops
- 8. Aether
- 9. Opodeldoc
- 10. Fryar's Balsam
- 11. Antimony Wine
- 12. Tincture of Guiacum
- 13. Salt of Wormwood
- 14. Asthmatic Elixir
- 15. Elixir of Vitriol
- 16. Liquid Laudanum

- 17. Goulard's Extract
- 18. Essence of Peppermint
- 19. Nitre
- 20. Jalap
- 21. Dr. James's Powders
- 22. Sweet Spirits of Nitre
- 23. Ipecacuanha Powder
- 24. Cream Tartar
- 25. Ginger
- 26. Gum Arabic
- 27. Senna Leaves
- 28. Blister Plaister
- 29. Liniment to Dress Blisters
- 30. Yellow Basilicon
- 31. Turner's Cerate
- 32. Ointment of Elder

it frequently happens that neither advice or medicines can be procured." Table 1 shows the complete list of medications in the Randall & Son medicine-chest.

This list is then followed by a directory of 59 "disorders" each accompanied by numbers corresponding to the above medications. For Apoplexy, Fainting Fits, Head-ach, Hysteric Fits, Lethargy, and Nervous Tremors, No. 6 (Spirits of Sal Volatile, i.e., ammonia smelling salts) is recommended. For "Anodynes" (i.e., condition of lacking vigor or zest), Convulsions, Diarrhoea, Looseness, and Spasms, No. 16 (Liquid Laudanum, i.e.,

tincture of opium) is recommended although caution is advised. And what of the "Anodyne Opodeldoc" (No. 9) regularly procured by King George IV? George IV lived an exorbitant lifestyle, including heavy drinking, over-eating, mistresses and staggering debt. He suffered painful gout as well as "dropsy" (peripheral edema) which can also be painful. Opodeldoc is an external treatment for various discomforts including gout, rheumatic pains and sprains. The *U.S. Pharmacopeia* describes it as consisting of powdered soap, camphor, oils, alcohol and water (18), although in earlier periods small amounts of laudanum were often added. "Anodyne" in this context means painless or pain-relieving.

Randall & Son also sold to customers a simple set of scales and weights (Figures 2 and 3). The Randall & Son business card found with the set (Figure 4) has a handwritten table of apothecaries' weight measures on the back of the card. This table is identical to the one printed in the 1795 pamphlet (11). It is not unreasonable to assume that these were handwritten by William Randall

on the business cards also provided to customers. The apothecaries' weight measures (employed in England and the United States until 1858) included: the grain (1 grain = 0.065 gram), the scruple = 20 grains (1.296 gram); the dram = 3 scruples (60 grains; 3.89 gram). As noted in the pamphlet, the impressions in the thin weights make so many grains, the smallest being half a grain. Undoubtedly, the balance and weights employed in the apothecary shop itself were much more sophisticated.



Figure 2. Simple scales for weighing drugs supplied in the Randall & Son medicine chest along with the wooden box which held them along with weights and a business card.

Photograph by Richard Johnson.



Figure 3. Weights supplied with the scales in Figure 2. Top row (left to right): 1 Scruple, ½ Dram, 2 Scruples, 1 Dram, 2 Drams; Bottom row (left to right): 4 grains, 5 grains, 7 grains; a 20 pfennig 1875 silver coin (1.00 gram) added perhaps 80 years after the set was originally sold. A ½ scruple weight may well be missing. See the text for definitions of these weights. Photograph by Richard Johnson.

What became of the Randall pharmacy? The 1940-41 *Kelly's Directory* (Southampton, UK) has a listing for Randall & Wilson, Chemist & Druggist, 146 High Street, but the establishment is not listed in the 1948-49 *Kelly's Directory* (8, 19). Sadly, an entry in the War Damage Index dated November 30, 1940 (Figure 5), indicates total loss of the building in a Luftwaffe bombing raid. Southampton, a port city, was frequently attacked during



Figure 4. Both sides of the Randall & Son business card. It is likely that the weights were handwritten by William Randall since they exactly match those in his 1795 pamphlet. Photograph by Richard Johnson.

the war and was heavily bombed on November 30 with loss of a large portion of High Street (8). William Randall was buried over a century earlier at St. Mary's Church in Southampton, which was also harmed by bombing. The church was rebuilt but the badly damaged headstones were removed and there is no marker to visit (8). Edward Mayor and William Brodribb and some members of their families are buried in Southampton Old Cemetery. Presently, High Street is a modern commercial thoroughfare with no trace of the famous pharmacy that served royalty, the wealthy and "the industrious poor" through parts of three centuries.

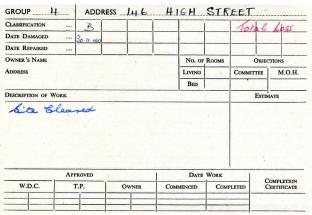


Figure 5. War Damage Index sheet for 146 High Street, Southampton. Courtesy Southampton, UK, City Archives.

The total destruction of the 150-year-old Randall & Wilson pharmacy would be a somber ending to this essay. Why not end humorously with a satire on a satire: "The Pharmaceutical Major-General," published in the same 1895 issue of *The Chemist and Druggist* that featured the Randall & Son pharmacy (20)? It is a play

on the popular song from the comic opera *The Pirates of Penzance*, written by Gilbert and Sullivan and first performed in 1879. Atrocious puns and all, it does hint at the scope of the knowledge and duties of a turn-of-the-century pharmacist.

The Pharmaceutical Major-General

(A Reminiscence of Mr. W.S. Gilbert)

I am the very pattern of a modern Major-Pharmacist
In training theoretical there's really nothing that I've missed;
I know the nice distinctions 'tween the orders in my botany,
Can analyze a triple salt and quote with ease a lot o' the
Jaw-breaking polysyllabics that please our wise societies,
Which breathless hang upon the words of learned notorieties.
I'll give you points in knowledge of the laws of diathermancy,
I weekly catch the latest craze that blows across the German sea.
I know the therapeutic use of hexa-hydro-pyridine
And just how much red iodide will salivate a horse-marine;
But in practical dispensing and the knowledge of the patent-list
I am the very model of a modern Major-pharmacist.

Why malva has been added to the order of Malvaceae, Why orchids are not scheduled with the Amaryllidaceae, Why the analytic principles of chemical philosophy Have failed to find the alcohol in spirits of theosophy; Why bandages are made with lint that's first been highly sterilized,

Why kittens now are reared on milken diet that's been felinised; Why logic's been replaced by an induction that's magnetical, And organized productions made by processes synthetical I know; and why it's hard to find fit uses therapeutical For novel and for elegant productions pharmaceutical: But in counter work and knowledge of the contents of the market-list,

I am the very model of a modern Major-pharmacist.

I know by heart each separate fact in tables posological, I estimate specific heat in contests theological; I qualitate the gold from mines that always will be minerless, And quantitate the butter in the milk of human kindliness; I estimate the casein in the Kurds that are Armenian, And soon rejuvenate a face that trouble's made a seamy 'un; I can theorize for ages on an isomorph that's tertiary, Can sterilize the pap that's served to infants in the nursery; Can fix a worm condenser to retorts that are satirical, And with a scientific law explain away a miracle: But in practical dispensing and in knowledge of the patent-list, I fear I am the model of a modern Major-pharmacist.

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Hampshire; for valuable correspondence with Lisa Moore, Archivist, Joanne Smith, Archivist, and Jean Watts, Archive Volunteer, City Archives, Southampton City Council, Southampton, UK; and for photography by Professor Richard Johnson, Department of Chemistry, University of New Hampshire, Durham, New Hampshire.

References and Notes

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About the Author

Arthur Greenberg was born in Brooklyn in 1946. He graduated with a B.S. in Chemistry from Fairleigh Dickinson University (1967) where he met Susan Covici, another chemistry major; they are celebrating 51 years of marriage. He obtained his Ph.D. from Princeton University (1971) studying dynamic stereochemistry with Pierre Laszlo. Following a U.S. Army commitment, he taught at Frostburg State College (1972-1977), New Jersey Institute of Technology (1977-1989), Cook College of Rutgers University (1989-1994), and was Chemistry Department Chair at University of North Carolina at Charlotte (1994-2000). He joined the University of New Hampshire as Dean, College of Engineering and Physical Sciences (2000-2005) and Professor of Chemistry (currently). Research interests include strained organic molecules (notably distorted amide linkages), polycyclic aromatic hydrocarbons on airborne particulates and metabolic ring opening of benzene. His antiquarian book collection stimulated long-standing interest in history of chemistry (authored From Alchemy to Chemistry in Picture and Story). He has sung with Portsmouth Pro Musica for the past fifteen years, roots for the Red Sox but still mourns the loss of the Brooklyn Dodgers.

Erratum

In the review of *The Posthumous Nobel Prize in Chemistry. Volume 2. Ladies in Waiting for the Nobel Prize* (this Journal, **2019**, *44(2)*, 139-147), the order of the editors was mistakenly inverted. The volume was edited by Vera V. Mainz and E. Thomas Strom.